

## 11. IMPACTS MITIGATION AND COMPENSATION

### 11.1 Impacts Mitigation

#### 11.1 (6)

**Comment** - 11 comments summarized

Constructing, operating and monitoring, and closing the proposed repository would require the use of water. DOE proposes to take this water from an aquifer that underlies both the repository site and the Amargosa Valley, which underlies a portion of Nye County, Nevada, and might also provide water in eastern portions of Inyo County, California. The placement of waste in the repository would position a large radionuclide burden upgradient from the Amargosa Valley, although the repository design would contain radionuclides for thousands of years, with substantial isotopic decay during containment.

Commenters stated that DOE should provide Nye County users a safe and adequate water supply to replace water the repository would take for activities during construction, operations and monitoring, and closure. Commenters also stated that DOE should guarantee Nye County users a safe and adequate supply to replace water that radionuclides from the repository could contaminate. Commenters stated further that DOE should provide long-term monitoring after repository closure to detect any radionuclides reaching the Amargosa Valley aquifer to provide warning to Nye County and Inyo County users. Some commenters compared the requested provision of water to the provision of water to residents living near failed hazardous waste sites.

**Response**

The EIS evaluates the potential for repository activities to affect both water availability and water quality. The updated analysis in this Final EIS projected that the Proposed Action would result in extremely small releases of radioactive contamination to the environment in the first 10,000 years after repository closure (more than 10,000 times less than the individual protection standard set by 40 CFR Part 197.)

In addition to the 10,000-year compliance period, DOE evaluated potential impacts for the period of geologic stability at the repository (that is, 1 million years). DOE performed this evaluation, in accordance with 40 CFR Part 197, to gain insight into the very-long-term performance of the repository and thus provide information for making both design and licensing decisions. These results show a mean peak dose rate that would be much lower than background levels. As a consequence, DOE does not anticipate impacts to water supplies that would require mitigation.

However, Section 116(c) of the Nuclear Waste Policy Act, as amended (the EIS calls the amended act the NWPA), establishes a procedure outside the EIS process by which affected units of local government, such as Nye County, could request assistance to mitigate impacts on affected units of local government if the repository was developed. Section 116(c) commits DOE to participate in this process and to provide assistance consistent with direction from Congress.

#### 11.1 (45)

**Comment** - 6 comments summarized

Commenters stated that DOE should propose to continue state and local government oversight functions through the performance confirmation period as a mitigation measure.

**Response**

The Testing and Performance Confirmation Program is designed to meet specific Nuclear Regulatory Commission requirements (defined at 10 CFR 63.102(M) and 10 CFR Part 63 Subpart F). The program allows for continued oversight through tests, experiments, and analyses to evaluate the accuracy and adequacy used to determine with reasonable expectation that the repository would meet postclosure performance requirements. This could be a lengthy program of monitoring and testing that could last as long as 300 years after the end of waste emplacement. It would provide data to future decisionmakers who would make the choices on closing the repository or retrieving the wastes. DOE is not able to determine what its commitment to oversight funding would be at this time because of dependence on Congressional funding and other factors.

### 11.1 (48)

#### **Comment** - 4 comments summarized

Commenters stated that the Draft EIS does not include any real mitigation measures and that repository design features should not be part of mitigation. Commenters asked for long-term groundwater monitoring plans and contingency plans as mitigation measures. Commenters asked DOE to propose mitigation measures for transportation-related impacts.

#### **Response**

Under the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1508.20) mitigation includes those activities that:

- Avoid the impact altogether by not taking a certain action or parts of an action
- Minimize impacts by limiting the degree or magnitude of the action and its implementation
- Repair, rehabilitate, or restore the affected environment
- Reduce or eliminate the impact over time by preservation or maintenance operations during the life of the action
- Compensate for the impact by replacing or providing substitute resources or environments

In its Forty Most Asked Questions, the Council on Environmental Quality states that mitigation “measures must include such things as design alternatives that would decrease pollution emissions, construction impacts . . .” (46 *FR* 18026, March 21, 1981). Alternative design measures to reduce impacts are properly included as mitigation measures. Chapter 9 of the EIS describes management actions that DOE could use to reduce or mitigate adverse impacts to the environment that could occur if the Department implemented the Proposed Action to construct, operate and monitor, and eventually close a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste.

As described in this Final EIS, DOE has established a cooperative agreement with Nye County to install a series of groundwater monitoring wells in the Amargosa Desert and the southern portion of the Nevada Test Site. The purpose of this program, called the Early Warning Drilling Program, is to characterize and monitor the saturated zone along potential transport pathways from Yucca Mountain. In addition to the flow and transport characterization data DOE will gain, the program will provide Nye County with its own independent monitoring and testing capability. In addition, DOE would design and implement a postclosure monitoring program in compliance with Nuclear Regulatory Commission regulations (10 CFR Part 63). Before closure, DOE would submit a license amendment application to the Commission, which would describe DOE’s proposal for continued oversight to prevent any activity that would pose an unreasonable risk of breaching the repository’s engineered barriers. DOE has modified the EIS to include the types of monitoring and other institutional controls it would contemplate.

Section 9.3 of the EIS discusses some mitigation measures DOE has identified that could reduce potential impacts from the national transportation of spent nuclear fuel and high-level radioactive waste. These measures address the possible impacts from the construction of a branch rail line or an intermodal transfer station in Nevada; construction of other transportation routes; upgrading of existing Nevada highways to accommodate heavy-haul vehicles; transportation of spent nuclear fuel and high-level radioactive waste from existing storage sites to the proposed repository; and fabrication of casks and canisters.

Section 180(c) of the NWPA requires DOE to provide technical assistance and funds to states and affected units of local government through which it plans to transport spent nuclear fuel or high-level radioactive waste.

Section 116(c) of the NWPA provides that an affected unit of local government or the State of Nevada can request financial and technical assistance from DOE and that such assistance can be designed to mitigate the impacts on affected units of local government from the development of the proposed repository and the characterization of the Yucca Mountain site. DOE would base any decision to provide assistance under Section 116 on an evaluation of a report submitted by an affected unit of local government or the State of Nevada to document likely economic, social, public health or safety, and environmental impacts.

### 11.1 (76)

#### **Comment** - 5 comments summarized

Commenters said that the United States needs to mitigate, through equity offsets and compensation, the cumulative impacts from the repository and from other Federal activities that have adversely affected Nye County's ability to plan and grow. Among the agencies mentioned were the Department of Defense (Air Force and Navy), Department of the Interior (Bureau of Land Management, National Park Service, and Fish and Wildlife Service), the Department of Agriculture (Forest Service), as well as continuing activities at the Nevada Test Site by DOE. Commenters contend that Nye County has been disproportionately affected by these activities.

#### **Response**

Impacts of past, present, and reasonably foreseeable future actions and their relationship to the Proposed Action and Inventory Modules are discussed throughout Chapter 8 of the EIS. While preparing this chapter, analysts reviewed numerous documents to determine where there was potential for cumulative impacts. Only those activities with a potential for cumulative impacts on environmental resources (including such things as land use and water) potentially affected by the repository were included in the discussion [for example, the Nevada Test Site, waste disposal sites, Nellis Air Force Range (now called the Nevada Test and Training Range), DOE waste management activities]. DOE reviewed resource plans, environmental impact statements, environmental assessments, strategic plans, consultation documents, Native American tribal meeting records, and other documents representing Federal, local, and private agencies and plans for public development and documented the potential for activities described in those documents or plans to present cumulative impacts.

DOE has examined the potential for the proposal to cause socioeconomic impacts in Nye County, including the potential for cumulative impacts. Based on its method of analysis, the Department believes that it has accounted for those reasonably foreseeable actions that could affect Nye County.

After DOE issued the Draft EIS, it again reviewed impacts from the proposed project and potential cumulative activities in the region of influence and has updated information where appropriate. This Final EIS includes a more detailed discussion of cumulative impacts including projected water use for the proposed Yucca Mountain Repository and water availability and water rights issues in Nye and surrounding counties.

Section 116(c) of the NWPA establishes a procedure outside the EIS process by which affected units of local government, such as Nye County, can report effects from the proposed repository to DOE and receive impact assistance upon agreement with DOE on matters raised in the report. Section 116(c) commits DOE to participate in this process and to provide assistance consistent with direction from Congress.

### 11.1 (97)

#### **Comment** - 3 comments summarized

Commenters stated that DOE should document all mitigation commitments in a Record of Decision and should not issue a separate or standalone Mitigation Action Plan. They quoted the Council on Environmental Quality National Environmental Policy Act implementing regulations (40 CFR 1505.2) as saying the Record of Decision must include the following: a statement explaining the decision; an explanation of alternatives DOE considered and those that were environmentally preferable; factors DOE considered in making its decision; an explanation of mitigation measures, if any, that DOE adopted or, if there were no mitigation measures, an explanation; and a monitoring and enforcement program for any adopted mitigation measures. Commenters further stated that a Mitigation Action Plan would not fulfill the requirements of and would be outside the legal framework of the National Environmental Policy Act governing minimization of the effects of major Federal actions. Commenters placed great significance on the institutional and legal stature of the Record of Decision and contended that commitments to mitigation not contained in a Record of Decision would not be commitments at all.

#### **Response**

Section 114(a)(1) of the NWPA authorizes the Secretary of Energy to decide whether to recommend approval of the Yucca Mountain site to the President for development as a repository for the disposal of spent nuclear fuel and high-level radioactive waste. A comprehensive statement of the basis for the recommendation, including a Final EIS, must accompany such a recommendation. However, the decision to approve the site rests not with the Secretary, but with the President. Because the President would make this decision, DOE does not anticipate issuing a Record of Decision if the Secretary recommends the site to the President.

DOE regulations (10 CFR 1021.331) require preparation of a Mitigation Action Plan when mitigation measures are identified in a Record of Decision. At this time DOE has not decided whether or not it would prepare a Mitigation Action Plan. However, the Yucca Mountain site, if approved in accordance with the NWPA, would be subject to licensing by the Nuclear Regulatory Commission. DOE, in submitting an application to construct and operate a repository would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of the licensing process.

DOE anticipates that the repository design would continue to evolve, creating additional opportunities for mitigation and potentially eliminating the need for some mitigation measures currently under consideration. Chapter 9 of the EIS, which provides DOE's initial list of possible mitigation measures available at this time, identifies DOE-determined impact reduction features, procedures, and safeguards; and mitigation measures under consideration for inclusion in the project plan and design. Section 9.1.3 identifies ongoing studies that could eventually influence mitigation measures related to the repository.

### **11.1 (102)**

#### **Comment** - 12 comments summarized

Commenters said that the Final EIS should identify which mitigation measures DOE is committed to and which it is considering. Specifically, commenters asked for guarantees on what mitigation DOE would perform, asserting that the Federal Government has a history of claiming sovereign immunity and of not compensating victims of radiation "damage" from Federal activities. One commenter said the Draft EIS did not establish a basis for mitigation negotiations because it did not assign specific roles and responsibilities for actions that cause impacts or ameliorate impacts. Several commenters stated that the EIS must, but the Draft EIS did not, identify and evaluate all feasible alternatives and specific measures for mitigating all potential impacts of the repository system and potential accidents that are identified in the EIS, whether or not they would be "significant." Similarly, a commenter stated that DOE needs to identify the specific measures required to minimize the impacts associated with the flexible design. A commenter said that mitigation measures should not be eliminated from consideration in the EIS because they are outside the jurisdiction of DOE or because they are not likely to be accepted or enforced. One commenter said a Record of Decision and a Mitigation Action Plan should include a comprehensive identification and evaluation of measures to mitigate each repository system impact. Some commenters stated that monitoring, avoidance, minimization, rectification, and reduction or elimination must be considered, as well as consultation with other appropriate agencies, as opposed to promises to consult, conduct further studies, only monitor, and request outside reviews. Further, commenters said the EIS must demonstrate that the mitigation measures would be sufficient to offset or otherwise minimize negative effects on the States of California and Nevada, local communities, and other states and communities along transportation routes. One commenter said that the EIS should present the full costs of remediation for a transportation accident and that DOE should establish an escrow fund to pay for such remediation and for compensation of affected parties.

#### **Response**

Chapter 9 of the EIS discusses mitigation measures DOE could implement or has identified for consideration. However, DOE has not yet made commitments to any specific mitigation measures. Section 116(c) of the NWPA provides for financial and technical assistance to mitigate likely economic, social, public health and safety, and environmental impacts. Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance to the environmental impacts considered in this EIS. Any decision to provide assistance under Section 116 would be based on an evaluation of any reports submitted by an affected unit of local government or the State of Nevada that documented the potential impacts for which mitigation assistance might be required.

DOE regulations (10 CFR 1021.331) require preparation of a Mitigation Action Plan when mitigation commitments are defined in a Record of Decision. At this time DOE has not decided whether or not to prepare a Mitigation Action Plan. However, the Yucca Mountain site, if approved in accordance with provisions of the NWPA, would be subject to licensing by the Nuclear Regulatory Commission. DOE, in submitting an application to construct and operate a repository would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of the licensing process.

In its Forty Most Asked Questions, the Council on Environmental Quality states that mitigation measures must include such things as design alternatives that would decrease pollution emission and construction impacts (46 *FR* 18026, March 21, 1981). The evolved repository design described in the Supplement to the Draft EIS and this Final EIS would reduce impacts of, and the uncertainties involved with, long-term repository performance.

Regarding compensation and remediation in the event of an accident, the Price-Anderson Act establishes a system of financial protection (compensation for damages, loss, or injury suffered) for the public in a nuclear accident. The Act provides liability coverage for commercial activities operating under a license from the Nuclear Regulatory Commission and DOE activities by establishing a system of private insurance and Federal indemnification that generally ensures that up to \$9.43 billion is available to compensate for damages suffered. Payment would be from Federal funds, or, if public liability arose out of nuclear waste activities funded by the Nuclear Waste Fund, from that Fund. As of November 2001, Congress was working on legislation associated with Price-Anderson Act Reauthorization.

Responsibility for cleanup of released materials would be shared between DOE, the owners of the materials, and carriers under regulation of the Motor Carrier Act of 1980. Section J.1.4.2.5 of the EIS provides information on the cost of cleanup and ecological restoration following a transportation accident.

### **11.1 (346)**

#### **Comment** - EIS000049 / 0004

In the past the government has done business with Nye County and when dollars were paid to the county and the community closest to the project is Amargosa and our community will be increased with population and the schools and housing and other services should be taken into account as to what we could do and how we could fund these problems without increasing our taxes. We have the second largest county in the nation and the population isn't very many. We are the second largest township in the country and the lowest population so you can bet we have high taxes now and when this project takes place the only logical thing would be to give a real look at the help you could give to make the transition as easy as possible.

#### **Response**

DOE has expanded its socioeconomic discussions in Chapter 3 to clarify the magnitude of potential impacts described in Chapters 4 and 6. This discussion includes a projection of baseline parameters through 2035 based on the most recently available information and assumptions. In the Final EIS, DOE provides a quantified estimate of school enrollment and changes in law enforcement and public service personnel requirements.

As indicated in Chapter 9 of the EIS, Section 116(c)(2)(A)(i) and (ii) of the NWPA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWPA, the Section 116 impact assistance review process and this EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by affected units of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

### **11.1 (514)**

#### **Comment** - EIS000154 / 0002

No mitigation. No mention of the fact that the town water system for Goldfield is pumped thirteen miles out in the flats right alongside the highway into town.

**Response**

Transportation analyses in Chapter 6 of the EIS indicate that shipments of spent nuclear fuel and high-level radioactive waste would not pose any harm to facilities such as Goldfield's water system.

Section 116(c) of the NWPA establishes a procedure, unrelated to the EIS process, by which affected units of local government, such as Nye County, can report effects from the proposed repository to DOE and receive impact assistance upon agreement with DOE on matters raised in the report. Section 116(c) commits DOE to participate in this procedure and to provide assistance consistent with direction from Congress.

**11.1 (653)**

**Comment** - EIS000157 / 0001

I would like to recommend that as part of the impact mitigation discussion in the final EIS, the DOE cooperate with the Nevada Division of Health, the Nevada Nuclear Waste Project Office, the Nevada Department of Environmental Protection, and Nye County as host to the proposed repository and other potentially affected counties and communities to facilitate a baseline radiological health assessment to be used in the future to accurately analyze potential health impacts of the proposed Yucca Mountain project.

**Response**

DOE has extensively evaluated the potential for public exposure to radionuclides in the Yucca Mountain region. Studies are continuing. Sections 3.1.8 and 8.2.7 of the EIS describe the DOE's work in this area. The affected environment and the potential cumulative health impacts associated with the repository (Section 9.2) discusses potential health-related mitigation measures.

The EIS analysis of public health does not show a potential for significant impacts to the population in the region of the proposed site. On this basis, DOE has concluded that a new baseline radiological health assessment is not warranted as an addition to the EIS evaluation of the Yucca Mountain proposal or for later comparative analyses.

**11.1 (655)**

**Comment** - EIS000192 / 0002

The Draft EIS identifies a number of impacts resulting from transportation of the nuclear material. However, there is no mention of mitigation measures that will be taken to minimize these impacts. The mitigation measures have to be addressed per NEPA requirements.

**Response**

Section 9.3.6 of the EIS mentions five mitigation measures under consideration to reduce health and safety impacts from transportation of radioactive materials, including measures to reduce exposure to radionuclides and measures to reduce accidents. Other parts of Section 9.3 describe measures to mitigate transportation impacts that DOE has adopted or is considering.

**11.1 (764)**

**Comment** - EIS000140 / 0004

In the EIS, there is nearly a complete lack of attention given to identification and evaluation of measures designed to mitigate impacts of spent fuel management within Nevada.

**Response**

Chapter 9 of the EIS describes many actions that are under consideration to mitigate potential impacts associated with a repository at Yucca Mountain.

**11.1 (1188)**

**Comment** - EIS000114 / 0009

What about the lack of payments equal to taxes for our county? You have an Environmental Impact Statement. What about the socioeconomic impacts and what are you going to do for us here in Pahrump and for Nye County? You've done crap.

**Response**

Payments-Equal-To-Taxes (PETT) are made pursuant to Section 116(c)(3)(A) of the NWPA which requires the Secretary of Energy to "...grant to the State of Nevada and any affected unit of government, an amount each fiscal year equal to the amount such State or affected unit of government, respectively, would receive if authorized to tax site characterization activities...." These payments, historically and for the future, are determined by estimating the amount of Yucca Mountain Project property, purchases (in and out of the State of Nevada), and business activities (employees) within the jurisdiction of an affected unit of local government. Nye County and the State of Nevada have been eligible to receive PETT since commencement of site characterization activities in May 1986. The other affected units of government include Clark, Lincoln, Esmeralda, Eureka, White Pine, Churchill, Lander, and Mineral Counties in Nevada, and Inyo County, California. Potentially, they have been eligible to receive PETT since the passage of the Nuclear Waste Policy Amendments Act of 1987.

For PETT relating to property taxes in Nye County, DOE and the County entered into a settlement agreement in July 1994 (amended in May 1999) whereby DOE would make specified payments on a fixed disbursement schedule. The current agreement runs through 2003.

As noted above, DOE acquires data from the Yucca Mountain Project organizations that purchase or acquire property for use in Nevada, have employees in Nevada, or use property in Nevada. These organizations include Federal agencies, national laboratories, and private firms. Not all of these organizations have Federal exemption status, so they pay the appropriate taxes. The purchases (sales and use tax), employees (business tax), and property (property or possessory use tax) of the Yucca Mountain Project organizations that exercise a Federal exemption are subject to the PETT (DIRS 103412-NLCB 1996).

The actual sales and use taxes, property taxes, and Nevada business taxes paid by Yucca Mountain Project organizations from May 1986 through September 2000 have been calculated. These organizations paid sales and use taxes of \$2.5 million for purchases made in Clark County, paid property or possessory taxes of about \$90,000 in Clark County, and paid the State of Nevada about \$810,000 in business taxes (DIRS 156763-YMP 2001). The PETT for sales or use taxes from May 1986 through June 2000 was about \$4.4 million for purchases in Clark County. For property taxes, it was about \$940,000 in Clark County. About \$130,000 was paid to the State of Nevada in business taxes.

DOE has not estimated and does not intend to make long-term PETT estimates. While the NWPA requires PETT payments, such payments are not discriminating factors in the EIS decisionmaking process.

In the Final EIS, DOE has expanded the socioeconomic discussions in Chapter 3 to clarify the magnitude of the potential impacts described in Chapters 4 and 6. This discussion includes a projection of baseline parameters through 2035 based on the most recently available information and assumptions. The Final EIS provides a quantified estimate, to the extent possible, of school enrollment and changes in law enforcement and public service personnel requirements. Other socioeconomic impact discussions are included in Sections 6.1.2.7 (related to transportation of spent nuclear fuel and high-level radioactive waste), and 8.2.6 (related to cumulative impacts).

The Final EIS incorporates Nevada population data developed by and received from county and State officials. In response to comments, DOE has updated its population estimates in the regions of influence to reflect the most recent state and local information, as well as Bureau of the Census 2000 population summary data for Nevada. For the repository- and transportation-related regions of influence, DOE performed REMI computer model simulations to establish an updated population baseline by accounting for population estimates and projections provided by county governments. In the absence of county information, population estimates and projections from the Nevada State Demographer's Office were used. The updated population baselines were then used to estimate populations for Clark, Nye, and Lincoln Counties and the Rest of Nevada through 2035. These population projections were then compared and adjusted to the 2000 Census population summary data. In this way, model population projections were calibrated to reflect the best available information.

The Final EIS baseline used REMI model projections of population totals for each Nevada county in the region of influence and the Rest of Nevada through 2035. The Clark County projections correspond to those used by the University of Nevada, Las Vegas (DIRS 136698-Riddel and Schwer 1999), which also used the REMI EDFS 53-sector model. DOE based inputs to Nye County projections for the Final EIS on data identified in Nye County

documents (DIRS 150996-Williams 2000; DIRS 148140-PIC 1998). The Nye County projections provided during the comment period are based in part on a REMI 14-sector model. DOE used (1) Lincoln County and Rest of Nevada projections through 2018 by the Nevada State Demographer's Office (DIRS 155350-State of Nevada 1999) as inputs to population projections for these areas; (2) county projections and Nye County source documents to project population distributions within the 80-kilometer (50-mile) radiological monitoring grid; and (3) California Department of Finance projections (DIRS 150294-California State Department of Finance 1998) for Inyo County as the basis for projecting population distributions for Inyo County sections of the grid (see Section 3.4 of the EIS).

#### **11.1 (1201)**

##### **Comment** - EIS000379 / 0001

As far as the nuclear accident involving trucking transport, it's been stated that there are potentially an estimated 40,000 trucking accidents a year in the US. If that's true, it means that the potential of an accident is quite high, and that brings me back to this thought about mitigation and how do you mitigate this sort of an accident with these kinds of materials? Because we know that ionizing radiation has effects. Some of the things that it causes are leukemia, birth defects, mental retardation, and physical deformations, cancers. So, essentially, there's really no mitigation.

It was stated here tonight that there is a cleanup fund, and there's legislation that ensures that if there's an accident, there's plenty of money to clean it up. But the problem that I see with this is that it's not really a matter of money. How do you mitigate cancer or how do you mitigate deformed babies? These sorts of things are just not easily remedied.

##### **Response**

In Chapter 6 of the EIS, DOE has analyzed potential impacts from transportation accidents. Given the number of shipments to the proposed repository, traffic accidents would be probable. However, DOE believes that such accidents would be unlikely to release radioactive material, primarily because of the structural integrity of the transportation casks. In the more than 2,700 shipments of spent nuclear fuel in the U.S. over the past three decades, there have been seven accidents, with no releases of radioactive materials to the environment. The risk assessment results discussed in the EIS demonstrate that radiological risks to persons on and near transportation corridors would be very small. The small risks, and the fact that these shipments would be a small fraction of all cargo shipped, means that moving spent nuclear fuel and high-level radioactive waste should not be the cause of major disruptions of the use of transportation corridors.

The Price-Anderson Act establishes a system of financial protection (compensation for damages, loss, or injury suffered) for the public in a nuclear accident, regardless of who causes the damage. Section M.8 of the EIS discusses this Act. Under the Motor Carrier Act of 1980 DOE, the owners of the materials, and carriers would share responsibility for cleanup of released materials. Under provisions of the DOE Draft Policy for implementing Section 180(c) of the NWPA, the Department would provide training for emergency response personnel. Section M.6 discusses these provisions.

#### **11.1 (1473)**

##### **Comment** - EIS010340 / 0002

I also recommend that all cultural resources on the Yucca Mountain Project be left in place. If any are removed, that this group be notified as soon as possible.

##### **Response**

DOE would include avoidance of significant archaeological sites as a mitigative option. Due to cultural value and cost, preservation of archaeological sites in place is the preferred option. If avoidance was not possible, a data recovery effort would be necessary to preserve the archaeological data. DOE is committed to using Native American monitors on field crews when significant data recovery (collection of resources) at a site is necessary. Archaeological contractors are on-call to monitor known sites for potential impacts from project activities. In addition, Native Americans can come to the site to monitor locations during Native American Interaction Program field trips, or during special trips, as necessary. Section 9.2.5 of the EIS contains additional information regarding proposed mitigative measures.



### 11.1 (1809)

**Comment** - EIS000332 / 0008

Nye County has repeatedly attempted to utilize the administrative process to inform DOE and other federal agencies of the impacts that have occurred, continue to occur, and will likely be exacerbated by the implementation of yet another federal action in Nye County. Federal agencies have repeatedly failed to fulfill their obligations through the NEPA [National Environment Policy Act] administrative process, and have failed to provide mitigations that are required. Nye County will continue to identify environmental issues, the potential impacts, and appropriate mitigation measures, and will ensure that the County's position is made part of the DOE's Administrative Record for the NEPA process.

**Response**

DOE acknowledges Nye County's active role in monitoring Yucca Mountain Repository-related activities. The Department has received and reviewed studies issued by the County and utilized this information in the Final EIS to the fullest extent possible. For example, the Final EIS socioeconomic baseline projections for the County incorporate projections provided by Nye County in its quarterly population updates. DOE has included the Nye County input in its project record and is cognizant of the issues Nye County has identified. DOE will work with Nye County and other potentially affected units of government to determine reasonable management actions required to mitigate potential adverse environmental impacts pursuant to 10 CFR 1508.20 and Section 116(c) of the NWPAA.

### 11.1 (1819)

**Comment** - EIS000771 / 0003

What guarantees will be in place by the DOE?

1. Transportation
2. Security -- Transportation and Containers
3. Evacuation Plans
4. Medical Plans -- Residents
5. Payments to Nevada for storage
6. Warning system -- Disaster
7. Insurance -- Residents

**Response**

DOE intends to implement the requirements of Sections 180(c) and 116(c) of the NWPAA. Section 180(c) requires the Secretary of Energy to provide technical assistance and funds to states for training public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions spent nuclear fuel and high-level radioactive waste would pass. The training is required to cover procedures for safe routine transportation and for dealing with emergency response situations.

In addition, Section 116(c)(2) of the NWPAA requires the Secretary of Energy to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impacts of the development of a repository and site characterization. The State and any affected unit of local government can request such assistance by submitting a report on probable economic, social, public health and safety, and environmental impacts.

With regard to the topics of concern listed in the comment, transportation and transportation security would be in full compliance with applicable U.S. Department of Transportation and Nuclear Regulatory Commission regulations. DOE would develop emergency response plans, including evacuation plans and warning systems, as part of the activities required by Section 180(c) of the NWPAA. The State, affected units of local government, and Native American tribes can request financial and technical assistance to implement these plans under Section 180(c).

The Price-Anderson Act provides liability coverage for commercial activities operating under a license from the Nuclear Regulatory Commission and for DOE activities. The Price-Anderson Act establishes a system of private insurance and Federal indemnification that generally ensures that as much as \$9.43 billion is available to compensate for damages suffered by the public from a "nuclear incident," regardless of who causes the damage. Payment would be from Federal funds or, if public liability arose from activities funded by the Nuclear Waste Fund

(for example, activities at a geologic repository), from that Fund. The liability of all responsible parties is limited to the amount of coverage provided by the Price-Anderson Act system. State and local governments cannot be required to provide additional compensation. DOE has revised the EIS to include more details about indemnification under the Price-Anderson Act (see Section M.8.1).

Price-Anderson indemnification would apply to transporters of nuclear waste from commercial nuclear utilities and from DOE sites to the repository. In addition to Price-Anderson indemnification, the Motor Carrier Act of 1980 and implementing regulations (49 CFR Part 387) require all motor vehicles carrying spent nuclear fuel or high level radioactive waste to maintain financial responsibility of at least \$5 million, which would be available to cover public liability from a non-nuclear incident and for environmental restoration. Federal law does not require rail, barge, or air carriers of radioactive materials to maintain liability coverage, although these carriers often carry such insurance voluntarily. Regardless of whether they had insurance, a radioactive materials incident involving these carriers would be subject to state law applicable to any other type of accident.

Congress would have to approve additional payments to Nevada and affected units of local government, other than Payments-Equal-To-Taxes that they would have received if the activity was a non-Federal activity.

#### **11.1 (1822)**

##### **Comment** - EIS000198 / 0003

We're being asked to place our children's futures in the hands of some what at first will be highly paid hourly personnel, and as time goes by, these positions will be held by untrained people.

##### **Response**

If the proposed repository became operational, the personnel involved in repository operations would be well trained, and training would be maintained in accordance with the Nuclear Regulatory Commission's license requirements. The Commission's final rules for Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain include training and certification requirements for personnel operating systems and components that are identified as important to safety in the Safety Analysis Report.

#### **11.1 (1877)**

##### **Comment** - EIS000443 / 0009

The DEIS does not consider property values. In the consequences of its court cases in New Mexico have shown property along waste transportation routes decreases in value. This needs to be examined for Nevada as well.

Finally, EIS should obtain estimates of loss of property values along the likely shipping routes which gets to the points of identifying national routes.

##### **Response**

DOE did not address potential change in property values near waste-transport routes because of the dynamic nature of real estate values and other factors that can influence property values. Assessing the perceived impact to property values or the impact of stigma is problematic because it does not depend on the actual physical effects or risks of the Proposed Action, but on the negative perception of those effects or risks by the public. Section 2.5.4 and Appendix N of the EIS provide additional information and addresses the issue of stigma from the Yucca Mountain Project.

Definitive information is not available on specific tracts of land that could be required for a specific transportation mode or route. For land that would be required or materially affected, the Department would fairly compensate landowners pursuant to Federal procedures. Should DOE be required to exercise its right of eminent domain, it would do so pursuant to applicable laws and regulations.

#### **11.1 (2410)**

##### **Comment** - EIS001160 / 0129

The effect of transport corridors be designated as "heavy-haul nuclear free" as a mitigating measure in order to alleviate concerns of motorists who wanted to avoid worst case scenario nuclear accidents should be considered within the FEIS. The extent to which such a measure might also reduce the possibility of exposure if there was a highway accident causing a loss of containment should be addressed within the FEIS.

**Response**

If the proposed repository was approved for the Yucca Mountain site and if DOE selected heavy-haul truck as a transportation mode in Nevada, heavy-haul trucks would operate in accordance with permits issued by the State of Nevada. As a consequence, the State would be responsible for providing information for motorists identifying the routes that would be used. Impacts presented in Chapter 6 of the EIS include exposure to passing motorists and a motorist stuck in traffic during incident-free transportation. These exposures, which would be very low for motorists on Nevada highways, would be about equal to exposures for persons who lived along transportation routes. The EIS also presents and discusses estimates of the dose to a maximally exposed individual in the event of an improbable maximum reasonably foreseeable accident in which radioactive materials were released from a cask (see Section 6.3.3). Mitigation measures that could be adopted to further reduce the possibility of accidents are addressed in Section 9.3.6 of the EIS.

**11.1 (3167)**

**Comment** - EIS001195 / 0005

A large mine haulage road would be intersected by the [Carlin] corridor. A crossing designed to safely accommodate loaded mine haulage trucks with a gross vehicle weight of 1,000,000 pounds must be incorporated. Additionally, other multiple crossings will be needed to provide access for ancillary mining facilities/activities and ranching needs. Safety measures tailored to both light vehicles and the large mining equipment must also be provided for at all crossings.

Additionally, we [Cortez Gold Mines] would require the installation of large culverts at strategic locations to allow for the future installation of dewatering pipelines that feed our infiltration galleries.

**Response**

DOE is aware of the Cortez Gold Mines operation in Crescent Valley (see Sections 8.1.2.3 and 8.4.2 of the EIS). At this time, however, definitive information is not available on specific tracts of land that could be required for a given transportation alternative. For any land that would be required, the Department would compensate landowners under Federal acquisition procedures. In other cases, as indicated in Section 9.3.1 of the EIS, mitigation measures would be developed where construction and operation of transportation facilities would result in (1) impacts to publicly used lands (2) direct and indirect land loss, and (3) displacement of capital improvements. Specific mitigation measures could include the items mentioned by the commenter.

**11.1 (4571)**

**Comment** - EIS001521 / 0085

Page 9-5, second bullet--(Surface-Water Measures Under Consideration) Using "hay bales" as more-or-less mitigative devices to trap sediment will be a short-term solution at best (by the way, straw is much cheaper). Using fabric fences and longer lasting "weir-notched" dams to create an impoundment for trapping sediment would be more reliable in accomplishing this task.

**Response**

DOE has changed Section 9.2.3.1 of the EIS to reflect that it would use sediment- trapping devices such as hay or straw bales, fabric fences, and weir-notched dams. DOE would choose the most appropriate methods for specific situations.

**11.1 (4869)**

**Comment** - EIS000337 / 0007

Pg. 2-37, Section 2.1.2.3, Repository Closure, 2nd par: There is no discussed plan on how the sealed repository will be monitored. If there is a monitoring plan, what is the plan if the monitoring reports a significant failure due to unforeseen problems. There must be a contingency plan in place before the DEIS is approved.

**Response**

The Testing and Performance Confirmation Program is designed to meet specific Nuclear Regulatory Commission requirements (see 10 CFR 60.137, 10 CFR 63.102(m), and 10 CFR Part 63 Subpart F). As defined, the program consists of tests, experiments, and analyses to evaluate the accuracy and adequacy of the information used to determine, with reasonable expectation, that performance objectives would be met. The *Performance Confirmation Plan* (DIRS 146976-CRWMS M&O 2000) formally documents and describes the Testing and Performance

Confirmation Program. DOE understands that ensuring public safety requires continued stewardship and has developed components for site stewardship programs including long-term monitoring of the site. The Proposed Action includes a lengthy program of monitoring and testing. This program would give future decisionmakers the option to take corrective actions, if required, and make societal choices on closing the repository or retrieving the wastes. After closure, a postclosure monitoring program required by 10 CFR Part 63 (see, for example, 10 CFR 63.51) would be further defined during the processing of the license amendment for permanent closure. The program would allow for continued oversight to prevent any activity at the site that poses an unreasonable risk of breaching the repository's engineered barriers, or increasing the exposure for individual members of the public to radiation beyond allowable limits. The license amendment for permanent closure must specifically provide an update of the assessment for the repository's performance for the period after permanent closure, as well as a description of the program for post-permanent-closure monitoring. Deferring a description of this program until the closure period would enable the identification of appropriate technology, including technology that could become available in the future.

#### **11.1 (5204)**

##### **Comment** - EIS001443 / 0028

All of the design alternatives considered in the EIS lead, ultimately, to a repository that is expected to leak (albeit at different rates depending on the particular choice of tunnel configuration, waste packaging, assumptions regarding geology, climate, and the response of the waste packages to the repository environment). Given the scale and complexities of the aquifers subject to potential contamination by the project, mitigation of impacts to these resources will range somewhere between extremely expensive to completely impossible. The DEIS should explain DOE's stance on providing mitigation, and either consider the adoption of feasible mitigation measures or state that such impacts cannot or will not be mitigated by the Federal government.

##### **Response**

The Environmental Protection Agency and the Nuclear Regulatory Commission have issued standards for the long-term performance of the proposed Yucca Mountain Repository (40 CFR Part 197 and 10 CFR Part 63, respectively). The standards set performance levels to protect the public health and safety. These levels do not presume absolute containment of the radioactive material forever. Rather, they specify safe levels of exposure for 10,000 years.

The long-term performance analysis described in Chapter 5 of the EIS demonstrates that the full range of predicted behaviors of the repository system would result in levels of contaminants in the groundwater well below the Environmental Protection Agency and Nuclear Regulatory Commission standards. The repository is expected to meet these standards, even if there were no institutional controls to avoid or mitigate impacts. Therefore, using the best available techniques and data, DOE concluded that the repository would maintain safety and environmental protection in accordance with the standards and that further mitigation would not be necessary.

DOE is considering a range of possible mitigation measures aimed at reducing effects of the proposed repository project. These measures would complement the physical features, procedures, and safeguards already incorporated in the project plan and design to reduce environmental consequences. Chapter 9 of the EIS, which provides DOE's initial list of commitments available at this time, identifies DOE-determined impact reduction features, procedures, and safeguards and mitigation measures under consideration for inclusion in the project plan and design. Chapter 9 also identifies ongoing studies that could eventually influence mitigation measures related to the project plan and design. For example, Section 9.2 discusses mitigation measures DOE would implement or consider to reduce potential impacts from the construction, operation and monitoring, and eventual closure of the proposed repository. Similarly, Section 9.3 discusses mitigation measures to reduce potential impacts from the national transportation of spent nuclear fuel and high-level radioactive waste.

#### **11.1 (5554)**

##### **Comment** - EIS001660 / 0046

Mineral County's comments have identified many areas where the impact assessment is incomplete and inadequate including: agriculture, air quality, archeological and ethnographic resources, environmental justice, flood plains and wetlands, land use and community development, local government, mining, public health and safety, public services, recreation, soils, transportation, vegetation, water, wild horses and burros, endangered species, and wildlife. Since impacts in these areas have not been fully disclosed, the discussion of mitigation is also inadequate.

Pending a complete and thorough analysis of the transportation impacts of the proposed action, a required mitigation list is difficult to prepare. However, based on Mineral County's comments to date, that mitigation must be included at least for:

- Reductions in the size, number, and productivity of federal grazing allotments;
- Emissions of fugitive dust, diesel particulate, and smoke from fires caused by the construction and operations on the improvements of alternative routes;
- The spread of noxious weeds, which may adversely affect agriculture, other vegetation, wild horses and burros, bison, and wildlife;
- Direct and indirect damage to archeological and ethnographic resources;
- Economic impacts on the mining, construction, services, and agricultural sectors of the economy;
- Environmental justice impacts on residents of rural areas;
- Damage to wetlands and changes in the boundaries of the flood plains from large storms;
- Radiological risks to the public along transportation routes;
- Damage or displacement of public infrastructure during rail corridor construction and related alternative transportation improvements;
- The taking of private property; reduced private property values due to perceived risk and stigmatization; reduced private property value due to restrictions on access; and fiscal, agricultural, and groundwater impacts caused by accelerated parcelization of private property,
- Direct and indirect fiscal impacts on Mineral County and other local governments;
- Restrictions on legal or physical access to mining claim and mineral deposits;
- Direct and indirect impacts on the provision of education and other essential public services;
- Recreational impacts from construction on the improvements of railway lines and alternative routes, as well as impacts caused by improved access to the back country and wildlife habitat;
- Adverse impacts on the existing surface transportation systems, including the Union Pacific railroad, I-80, US 6, US 50, NV278, NV 306, NV 376, and minor roads that provide access to private property, public lands, and mining claims;
- Direct and indirect impacts on rare and sensitive plants and their habitats;
- Direct and indirect impacts on wild horses, burros, and bison, including their forage, water, movement, and safety; and
- Direct and indirect impacts on designated riparian habitats and wildlife generally, including impacts from fragmentation, noxious weeds, interference with migration, disturbance or dewatering of water sources, and increased risk of wildlife.

#### **Response**

The possibility of impacts in Mineral County and the appropriateness of mitigation measures would depend on the mode and actual route of transportation of spent nuclear fuel and high-level radioactive waste to the proposed repository. However, candidate rail corridors do not directly pass through Mineral County. This Final EIS

identifies mostly rail as the preferred mode of transportation both nationally and within Nevada. If the site was approved, the choice of a final route alignment after the selection of a transportation corridor would be the subject of additional National Environmental Policy Act documentation, including analysis of and decisions regarding, potential mitigation measures. However, the EIS analysis did not show a potential for significant impacts to Mineral County in the areas the commenter identifies, and thus did not indicate a need for proposing specific mitigation measures.

Section 116(c) of the NHPA establishes a procedure by which affected units of local government such as Mineral County can report effects from the proposed repository to DOE and receive impact assistance upon agreement with DOE on matters raised in the report. Section 116(c) commits DOE to participate in this procedure and to provide assistance consistent with direction from Congress. DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

#### **11.1 (5999)**

**Comment** - EIS001879 / 0024

p. 9-5 to 9-6 Section 9.2.2.2, [Mitigating Measures for] Groundwater

The Draft EIS states that “The selection of a potential site with favorable characteristics is a fundamental impact reduction measure” is misleading and should be deleted. Site selection is not a mitigating measure.

#### **Response**

DOE agrees that this statement is misleading. An appropriate correction has been made to the EIS.

#### **11.1 (6048)**

**Comment** - EIS001898 / 0007

The DEIS does not include a thorough discussion of mitigative measures or of long-term environmental monitoring to measure the impacts on the environment.

Basis:

The DEIS does not identify what options will be combined for a Proposed Action. Public comments on the DEIS can be used by DOE to help in the selection of those options that will form the Proposed Action, refine its analysis of environmental impacts, and evaluate the need for particular mitigative measures. In this connection, it is important to ensure that all environmental impacts have been identified or bounded in order to provide a basis for decisions for mitigative measures. Mitigative strategies currently address dust suppression, the desert tortoise, and occupational health and safety. In addition, the FEIS needs to evaluate the need for mitigative strategies for water use, economic, social, cultural, biological, or public health and safety impacts.

For example, the discussion in Chapter 9 (Management Actions to Mitigate the Potential for Environmental Impacts) of the DEIS does not fully address mitigative measures for Native American interests, including several measures presented by the AIRD [American Indian Resource Document; American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement] (American Indian Writers Subgroup, 1998), such as ways to alleviate the severity of the effects on Native American cultural, religious, subsistence, recreational, ceremonial and associated uses of Yucca Mountain. The suggested mitigation actions in the AIRD include providing emergency preparedness training, establishing emergency medical facilities, and providing controlled access to sacred or ceremonial areas or resources.

Further, it is not apparent that a complete monitoring program for mitigative strategies has been clearly defined. The FEIS should include monitoring as a way of evaluating the effectiveness of any mitigative measures, such as measures to reduce impacts from transportation or waste handling at intermodal or site surface-based facilities (40 CFR 1505.2(c)).

Recommendation:

The FEIS should provide reasonable mitigative strategies to address potentially significant adverse impacts from the Proposed Action. Mitigative measures which comprise these strategies should be implementable and effective in

reducing environmental impacts. Moreover, the FEIS should discuss monitoring to assess the environmental impacts and the effectiveness of planned mitigative measures. As appropriate, this monitoring could be integrated with DOE's long-term performance confirmation monitoring.

References:

American Indian Writers Subgroup. *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement*. American Indian Resource Document MOL 19980420.0041. Las Vegas, NV: American Indian Writers Subgroup, Consolidated Group of Tribes and Organizations. 1998.

**Response**

At present, DOE does not have definitive information on specific tracts of land or community elements that the Proposed Action could affect, so it is premature to identify specific mitigation measures categorically. If the repository was approved, however, DOE would have discussions with potentially affected units of local government and consider appropriate support and mitigation measures. DOE would also continue its ongoing interactions with Native American tribes. In addition, specific mitigation measures could be part of a Mitigation Action Plan or similar plan, such as terms and conditions to Biological Opinions from the U.S. Fish and Wildlife Service and Nuclear Regulatory Commission licensing conditions. DOE, in submitting an application to construct and operate a repository, would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of any licensing process. At this time, DOE has not decided whether to prepare a Mitigation Action Plan. As described in Chapter 9 of the EIS, DOE intends to commit to reasonable management actions required to mitigate potential adverse environmental impacts. The Department would develop mitigation actions in cooperation with potentially affected units of local government.

Section 116(c)(2)(A)(i) and (ii) of the NWPAA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWPAA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS. This section also allows payments to the State of Nevada and to any affected unit of local government equal to taxes they would have received if the activity was performed by a non-Federal entity.

Under the NWPAA, the Section 116 impact assistance review process and the Yucca Mountain Repository EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not be limited either by the impacts identified in this EIS or by its findings on such impacts. A decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. Similarly, Section 180(c) of the NWPAA requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste.

Mitigation measures discussed in the EIS include those for water use (Sections 9.2.3 and 9.3.3), cultural resources (Sections 9.2.5 and 9.3.5), biological resources (Sections 9.2.4 and 9.3.4); and public health and safety (Sections 9.2.6 and 9.3.6). Chapter 9 discusses impacts in addition to the areas mentioned in this comment. Conversely, DOE has generally not proposed mitigation measures in areas where analyses did not identify consequential impacts. In some instances, an analysis might reveal impacts for which there would be no practical mitigation measures. Decisionmakers would consider the unmitigated consequences in weighing the need for the project against the potential for adverse consequences.

With regard to this comment's example of mitigative measures for Native American interests, DOE supported the preparation of the American Indian Writers Subgroup document (DIRS 102043-AIWS 1998) and used it as a primary reference to the EIS (see Sections 3.1.6.2.2 and 4.1.13.4). DOE would include avoidance of significant

archaeological sites as a mitigative action where feasible. If avoidance was not feasible, a data recovery effort would preserve the archaeological data. In addition, DOE would implement Section 180(c) of the NHPA, which requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of government and Native American tribes through whose jurisdictions transportation of spent nuclear fuel and high-level radioactive waste would occur. The training would cover procedures for safe routine transportation and for dealing with emergency response situations.

Since issuing the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and would improve operational safety and efficiency. The result of the design evolution process was the development of the flexible design (which the Supplement to the Draft EIS called the Science and Engineering Report Flexible Design). Although this design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass loading) the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain remain unchanged.

DOE would monitor impacts during the construction and operation of the repository. A postclosure monitoring program, required by 10 CFR Part 63, would include monitoring activities around the repository after closure. The regulation requires submittal of a license amendment for permanent closure of the repository [10 CFR 63.51(a)(1) and (2)]. This amendment must provide an update of the assessment for repository performance for the period after permanent closure, as well as a description of the program for postclosure monitoring. This program would include continued oversight to prevent any activity at the site that posed an unreasonable risk of breaching the repository's engineered barriers or increasing the exposure of individual members of the public to radiation beyond allowable limits. The details of this program would be defined during the processing of the license amendment for permanent closure. Deferring final development of this program until the closure period would enable a more complete understanding of the circumstances of the repository at closure and incorporation and use of new technologies that could become available by closure.

#### **11.1 (6744)**

##### **Comment** - EIS001878 / 0080

Pending a complete, thorough analysis of the transportation impacts of the proposed action, a list of required mitigation is difficult to prepare. Nevertheless, based on Eureka County's comments to date, mitigation must be included at least for:

- Conversion of agricultural land and water rights to other uses, fragmentation of range and grazing allotments, loss of forage, restrictions on livestock movement, loss of water supplies or restricted access to such supplies, loss of livestock in accidents, changes in value of agricultural land, changes in costs of agricultural production, and increased harassment of livestock;
- Emissions of fugitive dust, diesel particulates, and smoke from fires as well as reduced visual range caused by rail corridor construction and operations;
- Direct and indirect damage to, and loss of, archeological and ethnographic resources;
- Economic impacts on the mining, services, construction, and agricultural sectors of the economy;
- Environmental justice impacts on residents of rural areas;
- Damage to springs, wetlands, and surface waters (including the Humboldt River), and changes in the boundaries of flood plains;
- Radiological risks to the Humboldt River;
- Damage or displacement of public infrastructure (including the Crescent Valley airport) during rail corridor construction, as well as increased demand on public infrastructure due to construction employment;



- The direct and indirect housing impacts of a 500-person (or larger) construction crew;
- The taking of private property; reduced private property values due to perceived risk, stigmatization, restricted access, and other factors; and fiscal, agricultural, and groundwater impacts caused by accelerated parcelization of private property;
- Direct and indirect fiscal impacts on Eureka County and other local governments;
- Restrictions on legal or physical access to mining claims and mineral deposits; division of mining claims; and takings of private property rights related to mining;
- Direct and indirect impacts on the provision of education and other public, social, and medical services;
- Adverse impacts on the quality of life in Eureka County and neighboring areas, including diminished environmental quality, impacts on fish and wildlife, impacts from noise, impacts on scenery and views, diminished safety and security, loss of traditional livelihoods, and other effects;
- Recreational impacts from construction of a railroad bed, access roads, borrow pits, and fences, as well as impacts caused by improved access to the back country and wildlife habitat;
- Impacts on scenic resources, including both expansive views and features of interest;
- Impacts on soils from construction and operation of a railroad bed and access roads, including cuts, fills, and soil compaction;
- Impacts on solid waste disposal infrastructure;
- Adverse impacts on the existing surface transportation systems, including the Union Pacific railroad, I-80, US 6, US 50, NV 278, NV 306, NV 376, R.S. 2477 roads, and other roads that provide access to private property, public lands, and mining claims;
- Direct and indirect impacts from the spread of noxious weeds, and impacts on rare and sensitive plants and their habitats;
- Damage to groundwater resources from a radiological accident or the discharge of hazardous materials; adverse impacts on existing water rights; takings of private property rights in water; and adverse effects of well development and closure;
- Direct and indirect impacts on wild horses and burros, including impacts on their ranges, herd management areas, forage, movement, water supplies, safety, and management costs; and
- Direct and indirect impacts on the Bates Mountain antelope release area, designated riparian habitats, the Simpson Park habitat management area, and wildlife habitat generally, including impacts from conversion of habitat, fragmentation of habitat, loss of forage, restrictions on movement, diminished safety, loss of monetary and nonmonetary value, and increased management costs.

Specifically regarding mitigation of environmental impacts caused by fencing of railroad tracks and access roads, the DOE must commit to consultation not only with the BLM but also with local agricultural producers, public safety officials, and local governments to determine whether or not fences are needed at any location.

#### **Response**

Under the Council on Environmental Quality Regulations implementing the National Environmental Policy Act (40 CFR 1508.20) mitigation includes those activities that:

- Avoid or eliminate the impact over time by preservation or maintenance operations during the life of the action.
- Avoid the impacts by limiting the degree or magnitude of the action and its implementation.

- Repair, rehabilitate, or restore the affected environment.
- Compensate for the impact by replacing or providing substitute resources or environments.

Chapter 9 of the EIS discusses the mitigation measures DOE has identified that could reduce potential impacts from the operation of the repository and the transportation of spent nuclear fuel and high-level radioactive waste and covers many of the subject noted by the comment related to Eureka County. The mitigation measures specifically identified in Section 9.3 of the EIS are based upon the impacts discussed in Section 6.3 of the EIS and includes land use; air quality; biological resources and soils; hydrology, including surface water and groundwater; cultural resources, occupational and public health and safety; aesthetics; waste management; socioeconomics; noise; utilities, energy, and materials; and environmental justice.

Before selecting the mode or route in Nevada, the Department would have consultations with agencies at the Federal, State, and county levels. The selected mode and route would require a more detailed environmental and engineering analysis.

Mitigation measures that could be implemented to minimize potential impacts from the construction and operation of a transportation corridor would depend on several factors, including the corridor selected and the final alignment of the route within the corridor. Avoidance of impacts would be among the factors considered in corridor selection and route alignment. Once DOE selected a corridor and aligned a route, it could determine the need for and nature of any mitigation measures.

#### **11.1 (6771)**

##### **Comment** - EIS001878 / 0081

Mitigation related to emergency response and management. Mitigation measures for impacts to local governments for emergency response and management activities made necessary by the proposed action (including the transportation alternatives) are incomplete or absent. This is a significant oversight. Local emergency response resources will typically be the first on the scene of any accident involving the transportation of SNF [spent nuclear fuel] and HLW [high-level radioactive waste]. The DOE's National Transportation Program publication, *Transporting Radioactive Materials, Answers to Your Questions* (June 1999) says (p. 24), "As with any traffic accident, the local, Tribal, and State police, fire departments, and rescue squads are the first to respond to transportation accidents involving radioactive materials."

The introduction to Chapter 9 (p. 9-1) tries to head off any discussion of specific mitigation actions for emergency response services and emergency management actions. The discussion is based on an over-simplified reference to Section 116(c) of the Nuclear Waste Policy Act. While Section 116(c) may help mitigate impacts to public health and safety, it does not eliminate the need for identification of specific mitigation actions in the DEIS. Furthermore, it does not constitute the universe of mitigation measures for public health and safety.

Through the DEIS, DOE must examine all relevant mitigation measures, including mitigation of ongoing impacts over the life of the proposed waste shipments.

The discussion of occupational health and safety (p. 9-23) includes no mitigation to reduce the impacts from waste shipment transportation accidents. For example, it does not mitigate impacts from the lack of local emergency response capabilities. Such mitigation could include dedicated emergency response teams (not local government teams) that would be immediately available within a short response time to the scene of an accident. The teams could travel in conjunction with, but away from, SNF and HLW shipments, or they could be stationed strategically and equipped for quick initial response. Such teams would be a particularly effective mitigation where there are few or no local emergency resources.

Further, mitigation actions should address all phases of emergency management, including preparedness, response, and recovery. Thus, they should address programs, funding, and training.

Some mitigation actions described in Chapter 9 are so general that it is not possible to determine what they would consist of or how effective they would be. For example, the DEIS suggests a measure to "improve design of affected roadways to reduce accidents." (p. 9-23) The mitigation measures must be specifically designed to reduce

or eliminate foreseeable hazards from the operation of rail lines in Nevada. They must address hazards at rail crossings, during switching, when shipments are parked on sidings, and from train derailments.

**Response**

As the commenter notes, mitigation measures that could be adopted to further reduce potential impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste to a repository at Yucca Mountain, including measures to reduce the possibility of accidents, are addressed in Section 9.3.6 of the EIS. The development of mitigation actions related to emergency management, including preparedness, response, and recovery is premature because such mitigation actions, if needed, could differ from community to community, from mode to mode, and from route to route. As stated in Chapter 6 of the EIS, DOE cannot confidently identify the mode of transportation and routes that would be used beginning almost 10 years in the future and continuing for an additional 24 years. Nevertheless, DOE could fund mitigation measures that a qualifying local government sought to implement. Section 116(c)(2)(A)(i) and (ii) of the NWSA state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada to document likely economic, social, public health or safety, and environmental impacts. If the proposed repository was to become operational, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

If there was a decision to construct and operate the proposed repository, and after the identification of transportation modes and routes, local jurisdictions would be better able to identify the likely economic, social, public health and safety, or environmental impacts that would be the basis for a request for economic assistance, which could include assistance in providing additional medical and emergency response capabilities, under Section 116(c) of the NWSA.

With respect to training, including emergency response training, as required by Section 180(c) of the NWSA, DOE would provide technical assistance and funds to States for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdiction DOE would transport spent nuclear fuel and high-level radioactive waste. DOE anticipates that training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations.

**11.1 (7182)**

**Comment** - EIS001337 / 0073

Page 2-44 Nevada Transportation - Transportation is the major source of interest/concern to the people living in Lincoln County. This is due to the extreme likelihood that shipments to Yucca Mountain will pass through our county. Based upon objections expressed by Nevada leaders and actions taken related to DOE low-level waste transportation routing it is unlikely that any of the final routes, rail or highway, will go through Clark County. Likely routes whether legal weight truck, heavy-haul truck or rail will be through the rural areas of the State. The Draft EIS identifies a number of impacts resulting from transportation of nuclear material. However, there is no mention of mitigation measures that will be taken to minimize these impacts. It is essential that the EIS address mitigation plans in detail.

**Response**

Section 9.3 of the EIS discusses mitigation measures that DOE could adopt to reduce potential impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste to a repository at Yucca Mountain, including measures to reduce the possibility of accidents. The Department would identify and implement more specific mitigation measures if the repository was approved and a particular transportation mode and route were selected.

In addition, DOE could fund mitigation measures that a local government sought to implement. Section 116(c)(2)(A)(i) and (ii) of the NWSA state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and

environmental impacts.” DOE would base a decision to provide assistance under Section 116 on an evaluation of a report submitted by affected units of local government or the State of Nevada to document likely economic, social, public health and safety, or environmental impacts. If the proposed repository became operational, DOE would hold discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

**11.1 (7229)**

**Comment** - EIS001337 / 0122

Page 9-21 Section 9.3.4.2. This section does not include any measures to replace vegetation or animal unit months (AUM's) of forage lost to rail spur construction.

**Response**

As indicated in Section 9.3.1 of the EIS, DOE would evaluate appropriate mitigation measures that would minimize impacts to grazing lands. These actions could include providing access to lands on both sides of a rail line via underpasses, revegetation, and assisting in providing water should there be a need.

**11.1 (7302)**

**Comment** - EIS010485 / 0006

The Mitigation process, and Native review of any proposed mitigation is also not discussed [in the Supplement to the Draft EIS].

**Response**

DOE did not discuss any of the specifics concerning the mitigation process and Native American reviews in the Supplement to the Draft EIS, although it did acknowledge it would consult with Native American tribes and organizations to ensure the implementation of the most appropriate mitigation measures to reduce any adverse effects (see Section 3.1.6 of the Supplement to the Draft EIS). However, the interaction program with Native American groups designed to ensure the identification and evaluation of issues important to Native American, as well as a discussion of potential mitigation measures for the repository and transportation corridors, can be found in Sections 3.1.6.2, 9.2.5, and 9.3.5, respectively, of the EIS.

**11.1 (7415)**

**Comment** - EIS001912 / 0010

We are extremely concerned that DOE proposed no mitigation measures for waste transportation, particularly in light of the latent cancer fatalities associated with the program.

**Response**

Mitigation measures that could be adopted to reduce potential impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste to a repository at Yucca Mountain, including measures to reduce the possibility of accidents, are addressed in Chapter 9 of the EIS. Although radiation exposures would be small, Section 9.3.6 lists measures under consideration that could minimize radiation exposure for workers. More specific mitigation measures, including measures to reduce dose to the public during incident-free transportation, could be identified and implemented if the repository was approved and a particular transportation mode and route were selected.

**11.1 (8182)**

**Comment** - EIS001653 / 0106

Much of the mitigation in Chapter 9 should be included in the proposed action.

**Response**

Chapter 9 of the EIS describes a combination of mitigation measures that include measures that would be part of the Proposed Action; measures that are under consideration; and possible measures that DOE is still studying.

If the Nuclear Regulatory Commission granted a license for the repository project, DOE would define these mitigation measures in more detail and would establish its commitments.

### 11.1 (8187)

**Comment** - EIS001653 / 0108

None of the discussion in the long-term performance section [9.2.8] has much to do with mitigation. It has more to do with site selection, design, and defense in depth. Without these measures it is doubtful that DOE would even have a proposed action, which could meet regulatory standards.

#### **Response**

Section 9.2.6 of the EIS lists mitigation measures that DOE is considering that could reduce the long-term potential for possible radionuclide releases from the proposed repository.

### 11.1 (8188)

**Comment** - EIS001653 / 0109

Transportation mitigation needs to include the following:

- Efforts to monitor impacts to land values and development.
- Specific contingency plans for spill situation that describe roles, responsibilities and financial assistance.
- Mitigation assistance to local communities for emergency response capabilities, management and training.
- Measures to monitor and compensate for loss of visitors or other related economic development associated with transportation and repository development.
- Specific transportation mitigation measures such as escorts, dedicated mains, time of day restrictions, etc.
- Specific measures to accommodate heavy haul trucks, highway improvements, roadway maintenance and financial assistance committed by DOE.

#### **Response**

Chapter 9 of the EIS discusses mitigation measures DOE has determined it could use to reduce potential impacts from the construction, operation and monitoring, and eventual closure of the proposed repository. DOE believes that it is speculative to estimate impacts to land values and development, loss of visitors, or other perceived economic issues, and has not addressed them in the EIS. Estimating such impacts could result in a misrepresentation of the direct impacts of an action.

The Price-Anderson Act establishes a system of financial protection (compensation for damages, loss, or injury suffered) for the public in a nuclear accident, regardless of who causes the damage. Section M.8.1 of the EIS discusses the Price-Anderson Act. Under the Motor Carrier Act of 1980, DOE, the owners of the materials, and the carriers would share responsibility for cleanup of released materials. Under provisions of the DOE Draft Policy for Implementing Section 180(c) of the NWSA, the Department would provide technical assistance and funding for emergency response personnel. Appendix M also discusses these provisions.

Sections 2.1.3.3, 6.3, 9.3, and J.3 of the EIS discuss Nevada transportation. Specifically:

- Section 2.1.3.3.2 discusses road upgrades for candidate routes, along with the specific routes potentially used for heavy-haul truck transportation. Similarly, Section 2.1.3.3.2.1 discusses branch rail line construction and mitigation measures for the five rail implementing alternatives.
- Section 6.3 discusses impacts that could occur in Nevada from the construction and operation of a branch rail line or from upgrades to highways and the construction and operation of an intermodal transfer station.
- Section 9.3 discusses mitigation measures DOE would have to implement, has decided to implement, or has identified for consideration to reduce potential impacts from the transportation of spent nuclear fuel and high-level radioactive waste.
- Section J.2.3 discusses the use of dedicated rail lines.

**11.1 (8190)**

**Comment** - EIS001653 / 0110

DOE needs to establish a committee of potentially affected areas to review and monitor transportation shipments and potential impacts similar to the Transportation Protocol Working Group established by DOE-NVO [Nevada Operations Office]. The group could also address issues related to emergency response and management, risk perceived impacts, and whether they actually materialize and other issues.

**Response**

DOE could establish a committee analogous to the Transportation Protocol Working Group if the Yucca Mountain site was designated for a repository. DOE has noted the potential consideration of such a committee in Chapter 9 of the Final EIS, which identifies potential impact reduction features, procedures, and safeguards; and mitigation measures under consideration for inclusion in the project plan and design.

**11.1 (8416)**

**Comment** - EIS001873 / 0078

P.9-21. Surveys of biological resources at some future date do not constitute mitigation. These resources must be identified prior to the route decisions.

**Response**

Section 6.3.2 of the EIS discusses biological impacts that could occur as a result of implementing each Nevada transportation alternative. If the Yucca Mountain site was approved, DOE would issue at some future date, a Record of Decision to select a mode of transportation. If, for example, mostly rail was selected (both nationally and in Nevada), DOE would identify a preference for one of the rail corridors in consultation with affected stakeholders, particularly the State of Nevada. In this example, DOE would announce a preferred corridor in the *Federal Register* and other media. No sooner than 30 days after the announcement of a preference, DOE would publish its selection of a rail corridor in a Record of Decision. A similar process would occur in the event that DOE selected heavy-haul truck as its mode of transportation in Nevada. Other transportation decisions, such as the selection of a specific rail alignment within a corridor, would require additional field surveys, State and local government and Native American tribal consultations, environmental and engineering analyses, and appropriate National Environmental Policy Act reviews.

**11.1 (8664)**

**Comment** - EIS001837 / 0024

Mitigation measures are lacking. The DOE does not propose to move the people living in harms way. The DEIS should have addressed the issue of buying the homes along the railroad and helping the people to move if the DOE is going to implement this kind of disruptive, potentially dangerous nuclear waste shipment plan.

**Response**

Regarding requirements for land associated with branch rail line development, definitive information is not available at this time on specific tracts that DOE could need for a given transportation alternative. For land that would be required or otherwise affected, the Department would fairly compensate landowners under Federal acquisition procedures. If DOE was required to exercise its right of eminent domain, it would do so in compliance with applicable laws and regulations.

**11.1 (8702)**

**Comment** - EIS010004 / 0002

I would just offer one suggestion and that has to do with building a camp for YMP [Yucca Mountain Project] workers.

Within 3 or 4 miles of the tunnel entrance, DOE should build a man-camp along the lines of the camp that was used for over 10 years at Area 12. The rooms should be set up for one person, and each room should have its own bathroom. The camp could start off as a 200 man (and women) camp with room for expansion.

The cost should be \$1 per day, and \$1 per meal. This is just so you could keep track of how many workers are staying and eating in camp. This is very much along the lines as "Systems." (Over the hill.) If the DOE did this

they would attract a high quality of worker, particularly “travelers” who are staying in Las Vegas motels until they can catch a call out of the union hall.

The lack of a man-camp at YM has always been the number one drawback to working there. (Please don’t tell me about the man-camp in Mercury. DOE and Bechtel have turned that once fine camp into an overpriced, under performing, cost prohibitive, joke.)

**Response**

DOE appreciates the suggestion and the commenter’s participation in the National Environmental Policy Act process.

**11.1 (9087)**

**Comment** - EIS001873 / 0079

P.9-23. This document must include a commitment to these safety measures.

**Response**

Chapter 9 of the EIS, which provides DOE’s list of possible mitigation measures identified at this time, including impact reduction features, procedures and safeguards; and mitigation measures under consideration for inclusion in the project plan and design. Chapter 9 also identifies ongoing studies that could eventually influence mitigation measures related to the project plan and design. The Department notes that current contracts for operations of DOE sites do contain requirements and incentives for minimizing worker exposure to ionizing radiation, and that such provisions could be expected in contracts for operating the proposed repository and transportation of materials to the repository. The Department currently contracts for bus transportation of workers to the Nevada Test Site, and that bus transportation would be expected to continue. Other measures could be implemented as appropriate. DOE anticipates that the project plan and design would continue to evolve, creating additional opportunities for mitigation and potentially eliminating the need for some mitigation measures currently under consideration.

**11.1 (9309)**

**Comment** - EIS001888 / 0036

DOE needs to reflect on how local elected officials consider a major federal project such as the one being proposed in the DEIS. In making decisions, local officials must use any information, no matter how uncertain or well defined, to consider the implications to their constituents. This basic criterion may be stated as follows, “Is an event or impact from that event more likely than not to happen and, if so, what must we do to mitigate any harmful effects?”

In other words, the standard of proof for technical or statistical decision-making may have the appearance of being more stringent but it is generally much less related to the real world than that which needs to be considered by local elected officials and the public when evaluating the effects of major projects.

It should also be noted that technical or statistical data, even when applied with accepted “industry” standards, often provide an artificial appearance of reality. Often there isn’t sufficient experience, information or data to substantiate the numbers.

It is this need on the part of local governments that must be met in order for an environmental impact statement to reflect reality. Thus, DOE does a great disservice to local communities when the DEIS is not written to take into account the potential effects of the Yucca Mountain Program on the economy of Clark County and in other potential impact areas. For example, effects on program costs and the liability of local governments, on the necessity for transportation infrastructure improvements, on the potential loss of value of property, and the potential stigmatization of local area services and products have all been documented as impacts elsewhere. But, they have not been addressed in the Yucca Mountain DEIS. To reiterate, while there may be questions regarding the present or future occurrence of such impacts and their potential magnitude, it is important that there at least be acknowledgement of the issues in the DEIS.

If these impacts of greatest concern to the residents and elected officials of Clark County are not addressed, there can be no reasonable expectation that meaningful mitigation planning can take place. Since a major goal of an EIS is to provide a broad enough scope and enough detail to allow for such action, this DEIS must be considered incomplete and insufficient.

**Response**

The commenter accurately notes that the EIS makes use of statistical techniques in some disciplines to estimate potential environmental impacts. The commenter states that this provides an artificial appearance of reality and that often there isn't sufficient experience, information, or data to substantiate the numbers. This argument is precisely why DOE does not include the impacts of perceived risks, such as lost property value due to stigmatization, in its environmental impact documents, or attempt to presume what agencies need to do to serve their citizens. DOE has focused its evaluations on the parameters most likely to provide the decisionmaker discriminating information between alternatives.

Regarding mitigation, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures. In addition, as required by Section 180(c) of the NWSA, DOE would provide technical assistance and funds to states for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations. In addition, Sections 116(c)(2)(A) of the NWSA provides for financial and technical assistance and 117(c) of the Act sets forth assistance guidelines covering a number of issues including emergency preparedness and response, state liability arising from accidents, and necessary road upgrading.

**11.1 (9315)**

**Comment** - EIS001888 / 0045

The DEIS also does not contain sufficient detail in order to evaluate mitigation needs. While this may be addressed in future documents, the current DEIS language provides no guarantees. Thus, a whole range of issues and responsibilities are left ambiguous. This could result in a significant harm to the residents of Clark County.

**Response**

If the repository was approved, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures. As described in Chapter 9 of the EIS, DOE intends to commit to reasonable management actions required to mitigate potential adverse environmental impacts. DOE would develop mitigation actions in cooperation with potentially affected units of local government. At present, DOE does not have definitive information on specific tracts of land or community elements that could be adversely affected, so it is premature to identify specific mitigation measures categorically.

Section 116(c)(2)(A)(i) and (ii) of the NWSA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWSA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWSA, the Section 116 impact assistance review process and the Yucca Mountain Repository EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would be independent of the impacts identified in this EIS or its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts.

**11.1 (10507)**

**Comment** - EIS002105 / 0007

As a 54-year resident of the state, having two children I have raised in the state, my wife and I, I certainly do not want to [see] the State of Nevada become a wasteland in any way, shape or form, and I don't think that the acceptance of this material will cause that. Do I feel the waste will come to our state? Yes, I do. Should we be properly compensated? Yes, we certainly should be. Should every reasonable precaution be taken to protect our future generations? Of course. Every precaution should be taken. But I do feel that we're going to have the



material and I think that we need to protect ourselves economically, scientifically, every way we possibly can, but in the long run, the material has to go somewhere.

**Response**

The NWSA establishes a comprehensive process for determining the suitability of Yucca Mountain as a repository and for determining whether a repository should be constructed and operated at the site. After completion of site characterization and the issuance of the Final EIS, the Secretary of Energy must determine whether to recommend the site to the President. If the Secretary recommends the site to the President, the President must then decide whether to recommend the site to Congress. If the President recommends the site to Congress, then the State of Nevada has 60 days in which to submit a notice of disapproval regarding the site designation. Congress could then, if it chooses, override Nevada's disapproval by passing a resolution of repository siting approval within 90 calendar days of continuous session of Congress following receipt of the notice of disapproval from the State. If Congress overrode the State of Nevada's disapproval, DOE would submit an application for authorization to construct a repository to the Nuclear Regulatory Commission, which could approve or deny the application. If Congress does not pass an override resolution, then the site would be disapproved. Nevada citizens, through their democratically elected representatives in Congress and in the State Legislature and Governor's Office, have had and will continue to have opportunities to make their views known.

The NWSA also provides for funding to the State of Nevada and to the affected units of local government for the purpose of participating in the NWSA process of characterizing and selecting a site for a geologic repository. In addition, Section 116(c) of the NWSA requires DOE to provide financial and technical assistance to the State of Nevada and to the affected units of local government to mitigate the impacts of the development of a repository and the characterization of the site. Section 116(c)(3)(A) also authorizes the State of Nevada and any affected unit of local government to collect an amount equal to the amount that the state or local government would receive if authorized to tax site characterization, repository development and activities (known as Payments-Equal-To-Taxes, or PETT). If the repository was constructed and operated at Yucca Mountain, the State and local governments would also be able to collect an amount equal to the taxes imposed on other non-Federal real property and industrial activities. Financial assistance comes from the Nuclear Waste Fund, which is funded by contributions from nuclear utility ratepayers.

**11.1 (10802)**

**Comment** - EIS002043 / 0003

A significant concern to the people of Esmeralda County and particularly those residing in Goldfield, is the transportation of nuclear material. Esmeralda County believes that it is highly likely that political considerations will result in the county serving as a major corridor for nuclear waste transportation to the Yucca Mountain Site. Spent nuclear fuel and high-level radioactive waste will likely be transported through Esmeralda County by either legal weight truck, heavy-haul truck, rail or a combination of modes. The Draft EIS identifies a number of impacts resulting from transportation of the nuclear material without mention of any mitigation measures that will be taken to minimize these impacts. DOE needs to address mitigation measures in detail.

Is the Department not addressing impact mitigation because it assumes that impact mitigation will be achieved through implementation of Section 116c(2) of the Nuclear Waste Policy Act?

If yes, does the Department intend to work directly with each Affected Unit of Local Government to address impact mitigation needs?

In accordance with NEPA the Department should develop specific measures to mitigate impact. These measures should be described in detail in the EIS.

**Response**

Chapter 9 of the Yucca Mountain EIS discusses mitigation measures that DOE could use to reduce potential impacts from the construction, operation and monitoring, and eventual closure of the proposed repository.

Training for emergency response personnel would be provided under provisions of the DOE Draft Policy for implementing Section 180(c) of the NWSA. These provisions are described in Appendix M.6 of the EIS.

Sections 2.1.3.3, 6.3 and J.3 of the EIS discuss Nevada transportation. Specifically, the following items noted in this comment are discussed:

Section 2.1.3.3.2 discusses time-of-day restrictions for heavy-haul trucks and road upgrades for candidate routes and specific routes to be used for heavy-haul transportation. Similarly, Section 2.1.3.3.2.1 discusses rail-line construction and mitigation measures for the five rail implementing alternatives.

Section 9.3 discusses mitigation measures DOE is required to implement, has determined to implement, or has identified for consideration, to reduce potential impacts from the transportation of spent nuclear fuel and high-level radioactive waste.

Section 6.3 discusses the impacts that could occur in Nevada for the construction and operation of a branch rail line or from upgrades to highways and the construction and operation of an intermodal transfer station.

Section J.2.3 discusses the use of dedicated rail.

DOE intends to fully implement the provisions of Section 116(c)(2). The Department regards the process established by that section to be separate from the EIS process. Section 116(c)(2)(A)(i) and (ii) of the NWSA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWSA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWSA, the Section 116 impact assistance review process and the Yucca Mountain Repository EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, provision of assistance under Section 116 would be independent of the impacts identified in this EIS or its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts.

Need for any additional mitigation measures from construction and operation of transportation routes would depend on the transportation corridor selected and the final alignment of the route within the corridor. Once a specific corridor and route alignment was selected, mitigations appropriate to that corridor and route could be determined.

#### **11.1 (11329)**

**Comment** - EIS002267 / 0003

[DOE] has provided insufficient scope and detail to allow for planning and negotiation of mitigation and management plans. This is because they have narrowly defined the scope and nature of the impact, thus insuring that few impacts of significance would be identified.

#### **Response**

The Department has defined the scope of the analysis and defined impacts in accordance with Council on Environmental Quality and DOE guidance and regulations implementing the National Environmental Policy Act. Mitigation measures that DOE could undertake to reduce potential environmental impacts below the level described in the EIS are discussed in Chapter 9.

Section 180(c) of the NWSA requires the Department to provide funds and technical assistance for training for public safety officials of appropriate units of local government through whose jurisdictions the Department would to transport spent nuclear fuel or high-level radioactive waste. Further, Section 116(c) of the Act requires the Secretary to provide financial and technical assistance to the State and affected units of local government requesting such assistance to mitigate the impacts of the development of the repository.

### 11.1 (11451)

**Comment** - EIS010096 / 0009

Table S-2 – The SDEIS predicts a 30 to 60 percent increase in material transport related traffic fatalities under the low temperature alternative yet offers no suggestions for mitigating increased transportation risk nor considers whether any mitigation measures proposed in the DEIS remain valid. The implications of increased material transport through Lincoln County and the City of Caliente should be addressed in the FEIS.

**Response**

Section 9.3 of the Draft EIS discussed potential mitigation measures for transportation; these measures are still valid. Section 9.3 of this Final EIS contains additional information on mitigation of impacts.

DOE could also consider additional mitigation measures if the repository was approved and if decisions were made on the mode of transportation and the specific corridors that would be used. Any additional mitigation measures would be evaluated with appropriate Federal, state, tribal, and local agencies. Subsequent plans could include such things as infrastructure upgrades, operational guidelines aimed at alleviating specific problems, and emergency response training and assistance under Sections 116 and 180 of the NWPAA.

### 11.1 (11914)

**Comment** - EIS000308 / 0001

The last statement under Section S.8 [of the Draft EIS] is unacceptable. The DOE MUST be committed to research and development of additional measures to improve the long-term performance of the repository. Anything less is unacceptable. At least TRY to find better ways to mitigate the adverse effects of this thing for future generations.

**Response**

The Supplement to the Draft Environmental Impact Statement addresses the latest repository design and the corresponding environmental impact analyses. The information provided in the Supplement to the Draft EIS and this Final EIS demonstrates DOE's commitment to the improvement of repository long-term performance.

Since issuing the Draft EIS, DOE has continued to evaluate design features and operating modes that could reduce uncertainties or improve long-term repository performance, including the design of the waste package and improvements in repository operational safety and efficiency. The result of the design evolution process was the development of the flexible design. This design focuses on controlling the temperature of the rock between waste emplacement drifts (as opposed to areal mass loading described in the Draft EIS), but the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain remain unchanged. DOE acknowledges in the EIS that the flexible design could be further modified or refined during the License Application process, if the site was approved for development of a repository.

### 11.1 (12058)

**Comment** - EIS000226 / 0022

Page 28 of the County/City EIS Scoping Report points out the need for the DEIS to consider unavoidable impacts which can not be mitigated (i.e., additional transportation risk) and that compensation for such impacts must be considered.

**Response**

The EIS does consider additional transportation risk associated with the repository program. Further, DOE would implement the requirements of Section 180(c) of the NWPAA, which requires the Secretary of Energy to provide technical assistance and funds to states for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions transportation of spent nuclear fuel or high-level radioactive waste would travel. The training would cover procedures for safe routine transportation and for dealing with emergency response situations.

### 11.1 (12433)

**Comment** - EIS001106 / 0003

2.2.1 Decommissioning and Reclamation: This section provides no details about reclamation procedures, their application, and their chances for success.

**Response**

Section 7.1 of the EIS addresses potential short-term environmental impacts in the Yucca Mountain vicinity associated with the No-Action Alternative and includes substantial discussion of proposed decommissioning and reclamation activities.

In addition, Section 9.2.4 of the EIS addresses potential mitigation measures for potential impacts to biological resources and soils. Chapter 9 addresses mitigation measures associated with repository construction, operation and monitoring, and closure, and reclamation associated with the No-Action Alternative described in Section 2.2 would be similar in nature.

**11.1 (13010)**

**Comment** - EIS010334 / 0007

Under the Supplemental Draft EIS under the cultural resources section it primarily appears to devote itself to archaeological findings. We believe while this is indeed part of the cultural resources, it talks about mitigating issues and a lot of other -- lot of other proposals to try to protect areas in and the like and we believe that it's imperative that the Indian concerns and involvement be included into that section in the final EIS.

**Response**

This Final EIS incorporates the information provided in the Supplement to the Draft EIS. DOE acknowledges the importance of protecting cultural resources and minimizing potential impacts to them.

**11.1 (13012)**

**Comment** - EIS010334 / 0009

On page 3-16 it talks about under section 3.1.13 and this is under the Environmental Justice section, it alludes to and specifically states actually that the DOE will continue its protection of Native American cultural resources and protect the traditional cultural properties. It will implement appropriate mitigation measures.

To date there's been no studies specific to traditional cultural properties as identified under both Bulletins 30 nor as cultural landscapes under -- I'm sorry -- under traditional cultural properties under Bulletin 38 and traditional landscape areas under Bulletin 30. And as such there should be provisions to include those kinds of studies to make those determinations if indeed there's going to be protective measures implemented.

**Response**

Research to date has identified no traditional cultural properties of interest to groups other than Native American tribes at the Yucca Mountain Repository site itself. Once DOE determines the final mode, transportation corridor, and alignment, it would conduct corridor-specific studies for the alignment in accordance with the requirements of the National Historic Preservation Act and 36 CFR Part 800 to identify traditional cultural properties that might exist in or adjacent to the corridor. During these evaluations the Department would consult, as appropriate, with parties who have an interest in traditional cultural properties along the route.

DOE is committed to ensuring that its analyses include all historic properties that have traditional value to interested parties. The Department agrees that traditional cultural properties are not restricted to those of Native American concern (see DIRS 155897-Parker and King n.d.). Simply, DOE would consider the guidelines pursuant to McClelland et al. (DIRS 155896- n.d.), which addresses protecting rural and other cultural landscapes.

**11.1 (13211)**

**Comment** - EIS010244 / 0010

The SDEIS predicts a 30 to 60 percent increase in material transport related to traffic fatalities under the low-temperature alternative yet it does not offer suggestions for mitigating increased transportation risk nor considers whether any mitigation measures proposed in the DEIS remain valid.

**Response**

Section 9.3 of the Draft EIS discussed potential mitigation measures for transportation; these measures are still valid. Section 9.3 of the Final EIS contains additional information on the mitigation of impacts.

DOE could also consider additional mitigation measures if the repository was recommended and approved and if decisions on the mode of transportation and specific corridors were made. Any additional information would be coordinated with responsible Federal, state, tribal, and local agencies. Subsequent plans could include infrastructure upgrades and operational guidelines aimed at alleviating specific problems. Section 116 of the NWPA provides for participation in the identification of mitigation actions and Section 180 provides for funding and technical assistance for training.

#### **11.1 (13222)**

##### **Comment** - EIS010244 / 0021

The SDEIS indicates that DOE will continue performance confirmation activities following site approval and designation. DOE should propose to continue state and local government oversight functions to mitigate a longer site characterization like process.

##### **Response**

The Testing and Performance Confirmation Program is designed to meet specific requirements of the Nuclear Regulatory Commission (10 CFR Part 63.102(m) and 10 CFR Part 63, Subpart F). The program allows continued oversight. If the site is recommended for further development, the performance confirmation period would begin at the time of the site recommendation and would extend until the beginning of repository closure activities. It would provide data to future decisionmakers on the performance of the repository and support choices on closing the repository or retrieving the wastes. DOE is not able to determine its commitment for oversight funding at this time because of dependence on Congressional funding and other factors. If a repository was constructed at Yucca Mountain, DOE expects that it would be able to fund activities required for regulatory compliance and to implement the oversight provisions of the NWPA.

#### **11.1 (13375)**

##### **Comment** - EIS010182 / 0017

The SDEIS predicts 30 to 60 percent increase in material transport related traffic fatalities under the low-temperature alternative; however, it offers no suggestions for mitigating increased transportation risk nor considers whether any mitigation measures proposed in the DEIS remain valid. In addition, it predicts up to 50 percent increase in worker transport fatalities. This increase does not correlate with the estimated “small increase” in workers. Furthermore, due to the “blending design,” hotter fuel would be shipped/transported sooner. The SDEIS should consider mitigating increased transportation risk and what mitigation measures proposed in the DEIS still remain valid.

##### **Response**

Section 9.3 of the Draft EIS discussed potential mitigation measures for transportation, which are still valid. This Final EIS integrates the information provided in the Supplement to the Draft EIS and further elaborates on information obtained since DOE issued the Draft EIS.

DOE could consider additional mitigation measures if the repository was recommended and approved and if decisions on the mode of transportation and specific corridors were made. Any additional mitigation measures would be evaluated with responsible Federal, state, tribal, and local agencies. Subsequent plans could include such things as infrastructure upgrades and operational guidelines aimed at alleviating specific problems. Section 116 of the NWPA provides for participation in the identification of mitigation actions and Section 180 provides for funding and technical assistance for training.

#### **11.1 (13456)**

##### **Comment** - EIS010296 / 0042

Can radon release be reduced? According to the document, radon will account for 99 percent of the public exposure to radionuclides. Can anything be done to mitigate emissions and reduce those levels? Potential mitigation of the emissions should be addressed in the FEIS.

##### **Response**

Radon would emanate from the rock of the subsurface repository, enter the repository drifts, and be exhausted in ventilation air. For purposes of public exposure, the source of the radon would be the ventilation shafts and exhaust ducts that would service the subsurface repository, since the radon would be released in the subsurface ventilation

air. Nevertheless, DOE recognizes natural ventilation could be used to reduce long-term repository temperatures and radon emissions. As a consequence, natural ventilation has been proposed in several lower-temperature operating scenarios for the repository by extending the time during which loaded emplacement drifts were ventilated, so the repository would be operated at lower temperatures. The design of the repository is still evolving and the concept of natural ventilation is a design element that could be further developed for License Application. No members of the public would be routinely exposed within the proposed land withdrawal boundary, because this area would be unavailable to public access. If members of the public entered this area, it would be for limited periods, and not for the continuous yearly exposure considered for people living outside the land withdrawal area. If members of the public did visit the Yucca Mountain operations areas, they would be subject to DOE's radiation protection limits and guidance. Any potential radiation exposure from radon or other sources would be of limited duration and any potential radiation dose would be expected to be very low.

## 11.2 Impacts Compensation

### 11.2 (56)

#### **Comment** - 3 comments summarized

Commenters contend that the EIS has not identified adequate impact mitigation and state that EIS mitigation measures for the Proposed Action must include a special trust or escrow account for prompt and complete compensation to persons affected by radiation along transportation routes, as well as a baseline health assessment to enable the identification of such effects. Commenters stated that the mitigation program must include compensation for takings of private property rights, as required by the Constitution of the United States.

#### **Response**

Although DOE has characterized the environment along the candidate transportation routes in Nevada, it has not performed a baseline health assessment. DOE believes it has estimated the potential environmental impacts, including the health impacts, in sufficient detail to allow decisionmakers to determine the relative merits of each transportation scenario. However, DOE would assess the environmental and engineering conditions along the selected corridor in a subsequent National Environmental Policy Act document.

The Price-Anderson Act establishes a system of financial protection (compensation for damages, loss, or injury suffered) for the public in a nuclear accident, regardless of who causes the damage. See Section M.8 for a discussion of the Price-Anderson Act. Responsibility for cleanup of released materials would be shared between DOE, the owners of the materials, and carriers under regulation of the Motor Carrier Act of 1980. Funding and technical assistance for training of emergency response personnel would be provided under Section 180(c) of the NWPA. These provisions are described in Appendix M.8 of the EIS.

At present, definitive information is not available on specific tracts of land that could be required for a given transportation alternative. Where practicable, DOE would align corridors and design facilities to minimize the potential for impairment of private property rights. However, for any taking of property that could be required, DOE would compensate landowners under Federal acquisition procedures. If DOE needed to exercise its right of eminent domain, it would do so pursuant to applicable laws and regulations. DOE believes these actions, as well as those described in Chapter 9 of the EIS, would be appropriate and effective means of mitigating project impacts.

### 11.2 (108)

#### **Comment** - 13 comments summarized

Commenters stated that, because the project serves a national purpose, it is important that Nevada, which has not been the direct beneficiary of nuclear power, not bear the undue burden attributed to this project. Commenters further stated that it is important and entirely appropriate that state and local impacts of the project be offset through mitigating measures, financial and otherwise. Commenters said that a large compensatory package should be developed for residents of the repository area, who, commenters believe, are being disproportionately affected by a problem for which the whole country is responsible. Commenters believe that they should be entitled to discretionary use of funds received, and not be told how to spend them. Commenters stated that a great opportunity exists to derive maximum benefits not only during the repository study period but also during the waste isolation operation period as well.

**Response**

Under the Council on Environmental Quality regulations (40 CFR 1508.20) for implementing the National Environmental Policy Act, mitigation includes activities that (1) avoid the impact altogether by not taking a certain action or parts of an action; (2) minimize impacts by limiting the degree or magnitude of the action and its implementation; (3) repair, rehabilitate, or restore the affected environment; (4) reduce or eliminate impacts over time by preservation or maintenance operations during the life of the action; or (5) compensate for the impact by replacing or substituting resources or environments.

Section 116(c)(2)(A)(i) and (ii) of the NWPAA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWPAA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS. Any decision to provide assistance under Section 116 would be based on an evaluation of any reports submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. Neither Section 116(c) nor any other section of the NWPAA gives DOE discretion to provide general financial assistance to individuals.

DOE is considering a range of mitigation measures aimed at reducing adverse effects of the proposed repository project. The mitigation analyses in Chapter 9 of the EIS discuss impact reduction measures for the repository and for waste transport, as well as other mitigation measures DOE continues to evaluate in the event the Nuclear Regulatory Commission granted a license for the repository project.

Section 9.2 of the EIS discusses mitigation measures DOE has determined it would implement, or has identified for consideration, to reduce potential impacts from the construction, operation and monitoring, and eventual closure of the proposed repository.

Section 9.3 discusses mitigation measures DOE is required to implement, has determined to implement, or has identified for consideration, to reduce potential impacts from the transportation of spent nuclear fuel and high-level radioactive waste. These measures address impacts from the possible construction of a branch rail line or an intermodal transfer station in Nevada; construction of other transportation routes; upgrading of existing Nevada highways to accommodate heavy-haul vehicles; transportation of spent nuclear fuel and high-level radioactive waste from existing storage sites to the proposed repository; and fabrication of casks and canisters.

**11.2 (202)**

**Comment** - 4 comments summarized

Several commenters asked how they would be compensated for decreases in land values due to their proximity to candidate rail corridors. Some of these commenters also raised health-based concerns related to their possible proximity to routes.

**Response**

At present, definitive information is not available on specific tracts of land that could be required for a given transportation alternative. For any taking of property that could be required, the Department would compensate landowners under Federal acquisition procedures. Should DOE be required to exercise its right of eminent domain, it would do so pursuant to applicable laws and regulations. Where practicable, DOE would also align corridors and design facilities to minimize the potential for impairment of private property rights.

With regard to decreases in land values in proximity to rail corridors, DOE’s examination of relevant studies and literature concluded that while under some scenarios the perception of risk could result in adverse impacts on portions of a local economy (including property values), there are no reliable methods whereby such impacts could be predicted with any degree of certainty. While possible impacts can be envisioned, they are not inevitable. Any such adverse conditions would likely be an aftereffect of unpredictable future events, such as a serious accident.

The EIS analysis concluded that the potential for risk to public health and safety along any of the alternative transportation routes would be small. Based on the results of the impact analyses in Chapter 6 and Appendix J of

the EIS, as well as the results published in numerous other studies and environmental impact analyses cited in the EIS, DOE is confident that spent nuclear fuel and high-level radioactive waste could be and would be safely transported to Yucca Mountain. DOE also believes, as the EIS reports, that the potential impacts of transportation would be so low for individuals who live and work along the routes that impacts to individuals would not be discernible. The EIS analytical results are supported by numerous technical and scientific studies (see Appendix J of the EIS) that have been compiled through decades of research and development by DOE and other Federal agencies of the United States, including the Nuclear Regulatory Commission and the U.S. Department of Transportation, as well as the International Atomic Energy Agency.

#### **11.2 (454)**

**Comment** - EIS000091 / 0002

We will have more of an influx of people that will come here to live. I'm quite sure of that, and I hope that they do take care of the problems that Amargosa Valley itself, not Nye County and not the State of Nevada, but Amargosa will take care of X amount of influx of people for schooling their children, housing and medical and transportation.

#### **Response**

DOE has expanded its socioeconomic discussions in Chapter 3 of the EIS to clarify the magnitude of potential impacts described in Chapters 4 and 6. This discussion includes a projection of baseline parameters through 2035 based on the most recently available information and assumptions. In the Final EIS, DOE provides a quantified estimate, to the extent possible, of school enrollment and changes in law enforcement and public service personnel requirements.

Under the NWPA, the Section 116 impact assistance review process and the EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by affected units of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts.

DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures. In addition, as required by Section 180(c) of the NWPA, DOE would provide technical assistance and funds to states for training of public safety officials from appropriate units of local government and Native American tribes through whose jurisdictions it would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations. In addition, Sections 116(a) and 117(c)(5) of the NWPA set forth assistance guidelines covering a number of issues including emergency preparedness and response, state liability arising from accidents, and necessary road upgrading.

#### **11.2 (809)**

**Comment** - EIS000103 / 0007

We cannot allow Lake Barrett to use the term "applied uncertainty" in this project, and all I can say in conclusion [is] that you cannot put classified waste in our mountain, and if you're going to kill us, I want to be paid for it.

#### **Response**

While the exact concerns being expressed by the commenter are not entirely clear, the question of compensation for impacts, possibly focused on public health and safety, is apparent. In that regard, Chapter 9 of this EIS addresses the requirements for impact mitigation and compensation. Section 116(c)(2)(A)(i) and (ii) of the NWPA states that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic,



social, public health and safety, and environmental impacts. If the proposed repository was to become operational, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

## **11.2 (982)**

### **Comment** - EIS000242 / 0003

Finally, there is the question of equity. The risks posed by the spent fuel and the high-level wastes here in Idaho aren't going away. They're going to Nye County. Nye County will bear the burden of risk reduction in each of the counties where the spent fuel and DOE facilities are located, just as they must bear the legacy of more than 300 million curies of radioactivity left from the nuclear weapons testing area.

Once again, Nye County is called upon to host a facility that carries with it an inherent risk and stigma that will last, for all practical purposes, in perpetuity.

How much will one county be told to do in the national interests? Nye County has faithfully served the nation's need for secure facilities for the testing and development of nuclear and conventional weapons, and has received only negligible benefits from these actions.

The soils and water resources have been contaminated. The water resources over large regions have been effectively taken by land withdrawals. The proposed repository at Yucca Mountain will result in further contamination of the county's groundwater resources in additional land withdrawals.

The adverse cumulative impacts associated with the proposed repository must be adequately mitigated. A comprehensive package of compensation and equity offsets must be put forth as part of the proposed action so that the county has the wherewithal to ensure that the long-term health and safety of its residents is protected. Anything less would be quite unfair.

### **Response**

DOE has examined the potential for socioeconomic impacts in Nye County. In addition, the Department has examined potential cumulative impacts from the repository and other past, present, and reasonably foreseeable future actions in the affected region (see Chapter 8 of the EIS). Based on its analysis, DOE believes that it has accounted for actions that could affect Nye County. After publishing the Draft EIS, DOE reviewed cumulative impacts and updated the information in the Final EIS where appropriate. The review included activities at locations with a potential for cumulative impacts on environmental resources (Nevada Test Site, waste disposal sites, Nellis Air Force Range, DOE waste management activities, etc.). DOE reviewed resource plans, environmental impact statements, environmental assessments, strategic plans, consultation documents, tribal meeting records, and other documents of Federal, local, and private agencies and documented potential direct or indirect impacts.

Potential impact mitigation measures, as explained in Chapter 9 of the EIS, are not limited to impacts identified as part of the EIS process. Section 116 (c) of the NWPA establishes a procedure by which affected units of local government, such as Nye County, can prepare and submit a report to DOE documenting likely economic, social, public health and safety, and environmental impacts and can negotiate impact assistance based on matters raised in that report. Section 116(c) commits DOE to participate in that process and to provide assistance consistent with direction from Congress.

Although DOE can measure the public's perception regarding the geologic repository and transportation of spent nuclear fuel and high-level radioactive waste, there is no known method to translate these perceptions into quantifiable impacts. Researchers in the social sciences have not found a way to reliably forecast linkages between perceptions or attitudes stated in surveys and actual human behavior. While stigmatization of Southern Nevada can be envisioned in some scenarios, it is not inevitable. As a consequence, DOE addressed but did not attempt to quantify any potential for impacts from risk perceptions or stigma in this EIS. This issue is discussed in Section 2.5.4 and Appendix N of this Final EIS.

## 11.2 (996)

### **Comment** - EIS000235 / 0002

Assuming that the nation will move the waste to the Yucca Mountain site, such an action will shift risks to Nevada. Many areas of the nation will become risk free. The Draft EIS does not address the disequitable distribution of risk which will attend the Yucca Mountain project. The Final EIS should identify methods for mitigating/compensating Nevadans for bearing the risks that the rest of the nation does not want.

### **Response**

Section 116(c)(2)(A)(i) and (ii) of the NWSA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” DOE could give such assistance to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWSA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada to document likely economic, social, public health and safety, and environmental impacts. DOE would enter discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

While the EIS estimates environmental impacts, it does not, nor would it be appropriate to, address the equity of shifting risk from one location to another, although it does discuss overall impacts (or risks). Risk to the public for both preclosure operations and monitoring and postclosure performance would be small, as reported in Chapters 4 and 5, respectively.

## 11.2 (2415)

### **Comment** - EIS000659 / 0001

I recognize that whether we like it or not, nuclear waste may be transported to our community. We need to be provided information and needed protection for our health and safety and get some compensation for our community. I agree with others that have spoken in the previous meeting that I wish that we could have the matter taken care of sooner so that we don't waste so much of our tax money on this issue over so many years.

### **Response**

Section 116(c)(2)(A)(i) and (ii) of the NWSA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the Nuclear Waste Policy Act limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

In terms of impact mitigation, under the Nuclear Waste Policy Act, the Section 116 impact assistance review process and this EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts. If the proposed repository was to become operational, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

## 11.2 (2720)

### **Comment** - EIS000637 / 0003

We will be crossing the tracks about six or eight times a day. This is going to greatly impact our lives because we will have to schedule our lives around the train schedule. If it's even available to us. Will it be?

We don't want to be stopped at the crossing waiting for the train to go by because our radiation exposure will go up. We will lose spontaneity in our lives and the freedom to make our decisions for our movement in the valley we live in.

We use our hot springs to improve our health, and it is hardly compatible with train cars full of deadly waste sitting in Beowawe and going in full view from our hot water therapy bath.

This will definitely devalue our property and ruin us financially. Even if DOE did compensate us, would it be enough to relocate at another hot springs? Hot springs are not replaceable. We would be lucky to ever find another one to buy.

**Response**

While DOE has identified rail as the preferred mode of transportation both nationally and in Nevada, it has not identified a preferred corridor for a branch rail line or the schedule of waste shipments. The Department is considering five candidate rail corridors, but has not selected one as preferred. Minimizing impacts to current land uses, such as the potential impacts identified by the commenter for a branch rail line in the Carlin Corridor, would be a primary consideration in the selection of a corridor and a specific route alignment in that corridor.

DOE would have several options for locating a rail alignment within the Carlin Corridor should that corridor be selected. Specific information on the tracks of land that would be needed to construct a branch rail line and other specific impacts to property owners would not be available until DOE conducted surveys and environmental reviews. Therefore, DOE would not consider route-specific mitigation actions until it selected a corridor and a specific track alignment in the corridor. Assuming that another EIS would be prepared in support of alignment selection, mitigation actions would be evaluated in that document. DOE would mitigate or compensate landholders in compliance with applicable Federal laws and regulations.

Assuming one cask per shipment, there would be about 9 shipments per week (based on 10,725 total rail shipments under the national mostly rail scenario as noted in Section J.1.2.1 of the EIS).

**11.2 (2968)**

**Comment** - EIS000727 / 0013

There is no mention of actions to prevent, to compensate or to mitigate local governments for increased wear and tear and for damage to the highway infrastructure caused by the 220 foot long transport vehicle.

**Response**

DOE would consult with potentially affected units of local government and consider appropriate support and mitigation measures. Sections 116(c)(2)(A) and 117(c)(5) of the NWPA establish assistance guidelines on a number of issues, including emergency preparedness and response, state liability arising from accidents, and necessary road upgrading.

**11.2 (3123)**

**Comment** - EIS000726 / 0015

Health insurance does not cover nuclear exposure. There is no mention of how people are to be provided health care when they become sick.

**Response**

Illnesses caused by acute direct exposure to radioactive materials from accidents would be the responsibility of the transporter, and the transporter's insurance would cover such incidents. Cancer caused by low-level radiation exposure resulting from accidents probably would not become evident for many years, and would not be distinguishable from other causes of cancer, including naturally occurring radiation. Health insurance probably would not exclude coverage of such health impacts for reasons of nuclear exposure because of the difficulty of attributing a cause to an illness.

## 11.2 (3125)

### **Comment** - EIS000726 / 0017

There is no mention of compensation or mitigation because of an increase in government services required because of the activity here. There will be an increased need for government inspectors in several different organizations, increased law enforcement, etc. etc.

### **Response**

Based on the analysis in the EIS, DOE does not believe that there would be a substantial increase in need for government services as a result of the proposed repository. Nevertheless, Section 116(c)(2)(A)(i) and (ii) of the NWPA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS. A decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts.

As another form of assistance used to address the need for additional services to support the repository program, Payments-Equal-To-Taxes (PETT) are made pursuant to Section 116(c)(3)(A) of the Nuclear Waste Policy Act, which requires the Secretary of Energy to “...grant to the State of Nevada and any affected unit of government, an amount each fiscal year equal to the amount such State or affected unit of government, respectively, would receive if authorized to tax site characterization activities...” These payments, historically and for the future, are determined by estimating the amount of Yucca Mountain Project property, purchases (in and out of the State of Nevada), and business activities (employees) within the jurisdiction of an affected unit of government. Nye County and the State of Nevada have been eligible to receive PETT since commencement of site characterization activities in May 1986. The other affected units of local government include Clark, Lincoln, Esmeralda, Eureka, White Pine, Churchill, Lander, and Mineral Counties in Nevada, and Inyo County, California. Potentially, they have been eligible to receive PETT since the Nuclear Waste Policy Amendments Act was passed in December 1987.

As noted above, DOE acquires data from the Yucca Mountain Project organizations that purchase or acquire property for use in Nevada, have employees in Nevada, or use property in Nevada. These organizations include Federal agencies, national laboratories, and private firms. Not all of these organizations have Federal exemption status, so they pay the appropriate taxes. The purchases (sales and use tax), employees (business tax), and property (property or possessory use tax) of the Yucca Mountain Project organizations that exercise a Federal exemption are subject to the PETT (DIRS 103412-NLCB 1996).

The actual sales and use taxes, property taxes, and Nevada business taxes paid by Yucca Mountain Project organizations from May 1986 through September 2000 have been calculated. These organizations paid sales and use taxes of \$2.5 million for purchases made in Clark County, paid property or possessory taxes of about \$90,000 in Clark County, and paid the State of Nevada about \$810,000 in business taxes (DIRS 156763-YMP 2001). The PETT for sales or use taxes from May 1986 through June 2000 was about \$4.4 million for purchases in Clark County. For property taxes, it was about \$940,000 in Clark County. About \$130,000 was paid to the State in business taxes.

DOE has not and does not intend to make long-term PETT estimates. While the NWPA requires PETT payments, they are not discriminating factors in the EIS decisionmaking process.

If the proposed repository was to become operational, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures. In addition, as required by Section 180(c) of the NWPA, DOE would provide technical assistance and funds to states for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations. Sections 116(c)(2) and 117(c)(5) of the NWPA set forth assistance guidelines covering a

number of issues, including emergency preparedness and response, state liability arising from accidents, and necessary road upgrading.

## **11.2 (5169)**

### **Comment** - EIS001910 / 0008

The DEIS does not include information regarding Indian nations and their current and future economic development initiatives. Tribes along potential corridor routes are investing in tribal and joint economic ventures and which facilities will be along highway transportation routes contained in the DEIS. As part of the trust responsibility to ensure protection of economic well-being of Indian nations, the document needs to include a section of what can be done in the event of a radioactive waste transportation accident which impacts an Indian tribe as the mitigation and liability circumstances can be quite different than state and local government considerations.

### **Response**

As required by Section 180(c) of the NWSA, DOE would provide technical assistance and funds to states for training of public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations. DOE would institute this training before beginning shipments to the repository. In the event of an incident involving spent nuclear fuel or high-level radioactive waste, the transportation vehicle crew would notify local authorities and the central communications station monitoring the shipment. DOE would make resources available to local authorities, if requested, to respond to such an incident. However, state and tribal governments have a primary responsibility to respond to and protect the public health and safety in their jurisdictions in accidents involving radioactive materials.

In addition, Sections 116 and 117(c) of the NWSA set forth assistance guidelines covering a number of issues, including possible public health and safety, environmental, social, and economic impacts; ongoing emergency preparedness and response; liability arising from accidents; and necessary road upgrading. Section 118 of the Act authorizes the Secretary of Energy to provide grants to affected Native American tribes to participate in repository-related activities and to enable such tribes to determine potential economic, social, public health and safety, and environmental impacts of a repository on Native American reservations and its residents. Any affected tribe can request such assistance by preparing and submitting a report on the probable economic, social, public health and safety, and environmental impacts. Section 118(b)(3) requires the Secretary to provide financial and technical assistance to any affected Native American tribe that requests it to mitigate the impacts of the development of a repository where there is a site which the Nuclear Regulatory Commission has authorized construction of a repository. If a repository at Yucca Mountain was recommended and approved for development, DOE would enter into discussions with potentially affected Native American tribes and consider appropriate support and mitigation measures.

The Price-Anderson Act provides liability coverage for commercial activities operating under a license from the Nuclear Regulatory Commission and DOE activities by establishing a system of private insurance and Federal indemnification that generally ensures that up to \$9.43 billion is available to compensate for damages suffered by the public, from a "nuclear incident," regardless of who causes the damage. Payment would be from government funds or, if public liability arose out of nuclear waste activities funded by the Nuclear Waste Fund (for example, activities at a geologic repository), from that Fund. The liability of all responsible parties is limited to the amount of coverage provided by the Price-Anderson Act system. State and local governments cannot be required to provide any additional compensation. Price-Anderson Act indemnification would apply to the operators of a nuclear waste repository at Yucca Mountain and to transporters of nuclear waste from commercial nuclear utilities and from DOE sites to the repository. The EIS has been revised to include more details about indemnification under the Price-Anderson Act (see discussion in Section M.8.1 of the EIS). The EIS (Section 3.1.6.2) recognizes that tribes are separate entities from state and local governments. In Section 3.1.13 of the EIS, DOE identifies the minority or low-income populations in the State of Nevada in relation to Yucca Mountain and the alternative rail and heavy-haul truck corridors. Section 3.2.2.1.5 acknowledges the presence of Native American communities in at least two of the candidate rail corridors that are under consideration. DOE has also included maps of the routes used in the transportation analysis that show tribal boundaries in relation to the site and the transportation corridors (see Figures in Appendix J.4). Section 6.3.4 addresses environmental justice impacts that could occur in Nevada as a result of the shipment of spent nuclear fuel and high-level radioactive waste to the proposed repository.

Chapter 9 of the EIS, which provides DOE's initial list of mitigation commitments available at this time, describes management actions that DOE would consider to reduce or mitigate adverse impacts to the environment that could occur if it implemented the Proposed Action. If DOE made a decision on a specific mode and route of transportation through Nevada to the repository site, it would perform additional engineering and environmental studies to support detailed designs and additional National Environmental Policy Act reviews that included potential impacts to minority and low-income populations. Along with these studies, the Department would initiate consultations with responsible Federal, State, tribal, and local agencies to gather information and address potential mitigation of impacts.

**11.2 (5721)**

**Comment** - EIS010073 / 0010

Page 2-3 - The SDEIS should consider locating titanium drip shields, emplacement pallets and other required off-site manufactured goods in counties near to Yucca Mountain, in part, to mitigate otherwise unmitigable impacts.

**Response**

DOE has made no decisions with regard to the procurement or manufacture of waste shipping casks, emplacement pallets, or drip shields. Final determinations would be subject to Federal procurement regulations, total need, timing, manufacturing capabilities, and availability of raw materials. DOE assumed for purposes of analysis that existing vendors in Massachusetts, North Carolina, Ohio, Pennsylvania, and Tennessee would supply waste shipping casks and emplacements pallets. However, DOE would not categorically exclude any location as a possible site for repository support functions.

**11.2 (5844)**

**Comment** - EIS001845 / 0006

Provide the funding to counties and states to repair roads, bridges and overpasses to compensate for wear and deterioration caused by heavy loads.

**Response**

Because existing rail and highway systems would be adequate for transporting spent nuclear fuel and high-level radioactive waste to Yucca Mountain, infrastructure upgrades would not be necessary and therefore are not included in the analysis. Analyses presented in Section 6.3.3 of the EIS describe the DOE assumptions regarding upgrade and maintenance of highways that would be used by heavy-haul trucks if this mode was selected for transportation in Nevada.

At this time, DOE has not identified a preference for a specific rail corridor within Nevada. A preference for a corridor(s) would be identified in consultation with affected stakeholders, if the Yucca Mountain site was approved pursuant to the NWPA.

Sections 116(c) and 117(c)(5) of the NWPA set forth assistance guidelines covering a number of issues, including necessary road upgrading. In addition, Section 116(c)(2)(A)(i) and (ii) states that "the Secretary shall provide financial and technical assistance to [an affected unit of local government or the State of Nevada]... to mitigate the impact on such [an affected unit of local government or the State of Nevada] of the development of [a] repository and the characterization of [the Yucca Mountain] site. Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Any decision to provide assistance under Section 116 would be based in part on the evaluation of a report submitted by an affected unit of local government or the State of Nevada to document likely economic, social, public health and safety, or environmental impacts. If the proposed repository was to become operational, DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

**11.2 (6142)**

**Comment** - EIS001888 / 0167

[Summary of comments noted by Clark County Nuclear Waste Division staff at various citizens' meetings.]

Others felt that now is the time to go after DOE for mitigation funds.

**Response**

As indicated in Chapter 9 of the EIS, Section 116(c)(2)(A)(i) and (ii) of the NWPA state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWPA, the Section 116 impact assistance review process and this EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. DOE would enter into discussions with the State of Nevada and affected units of local government and consider appropriate support and mitigation measures.

Further, as required by Section 180(c) of the NWPA, DOE would provide technical assistance and funds to states for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations. In addition, Sections 116(a) and 117(c)(5) of the NWPA set forth assistance guidelines covering a number of issues including emergency preparedness and response, state liability arising from accidents, and necessary road upgrading.

**11.2 (6143)**

**Comment** - EIS001654 / 0031

Page S-62. Management Mitigation Actions

We may have missed it but there does not appear to be any reference in this section or Chapter 9 that considers socioeconomic impact mitigation measures for the proposed action. That may be because the socioeconomic impact analysis was conducted for an extraordinarily large region of influence that included metropolitan Las Vegas and concluded all impacts were negligible. (See NARUC ES-11 for our critique of that approach.)

DOE should consult with appropriate officials within Nevada and Nye County over alternative means of obtaining community support closer to the site than Las Vegas for a period of peak support need during construction and pre-closure phases of the repository use. However, all such infrastructure would be developed just for that period of need and should be removed at the stage when all the waste has been emplaced and support needs are greatly reduced.

A support “base” could be developed under federal government ground rules and some financial support that could serve many of the housing and community support services closer to the site than Las Vegas, yet would not lead to further permanent development near the repository if there is the risk of radiation, however small, over the long-term performance period of the repository.

There are costs and benefits of such a government-managed approach, but they are worth examining together with State and local stakeholders. The dual objective should be:

- Provide some support functions closer to the repository than Las Vegas, yet,
- Not encourage further development in an area which was chosen for being lightly populated

We realize there is already some resentment among some portion of the Nye County area population over “the government” being an intrusion in their lives. We simply suggest that some cooperative government mitigation measures be considered that enable the repository to be built and reduce the burden on present residents. The suggestion is to consider how to best accommodate an influx of increased demands on community services by

having them cooperatively managed with federal government assistance. It may not be the complete answer but it is worth considering through cooperative public-private planning.

**Response**

Throughout the EIS process, DOE has maintained interactions with a number of government agencies and other organizations (see Appendix C of the EIS). The Department has been sensitive to the concerns of the potentially affected units of local government as defined in the NWP. DOE has offered local governments the opportunity to submit documents providing their perspectives on issues associated with the EIS. In addition, DOE holds formal meetings twice a year with the affected units of local government. These meetings have included descriptions and briefings on a range of issues of interest to local governments. DOE has also held numerous informal meetings with representatives.

DOE has expanded its socioeconomic discussions in Chapter 3 to clarify the magnitude of potential impacts described in Chapters 4 and 6. This discussion includes a projection of baseline parameters through 2035 incorporating the most recently available information and assumptions.

Section 116(c)(2)(A)(i) and (ii) of the NWP state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the Nuclear Waste Policy Act limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWP, the Section 116 impact assistance review process and the EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. If the proposed repository became operational, DOE would enter into discussions with the State of Nevada and affected units of local government and consider appropriate support and mitigation measures.

**11.2 (6144)**

**Comment** - EIS001888 / 0503

[Clark County summary of comments it has received from the public.]

The State of Nevada and Clark County should negotiate a contract to accept the waste at the border in exchange for funding for a technology center at UNLV [University of Nevada, Las Vegas] and UNR [University of Nevada, Reno] and money for elementary to HS [high school] education.

**Response**

DOE is authorized to consider some forms of compensation as discussed in Chapter 9 of the EIS. The NWP allows the Secretary of Energy to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impact of the development of a repository and characterization of the site. The State and any affected unit of local government may request such assistance by preparing and submitting a report on the likely economic, social, public health and safety, and environmental impacts.

In addition to this financial assistance, the Secretary is also authorized to grant to the State and any affected unit of local government an amount each fiscal year equal to that amount they would receive if authorized to tax the site characterization, development, and operation of a repository as they would tax non-Federal real property and industrial activities. Payments-Equal-To-Taxes (PETT) are made pursuant to Section 116(c)(3)(A) of the Act, which requires the Secretary of Energy to grant to the State of Nevada and any affected unit of government, an amount each fiscal year equal to the amount such State or affected unit of government, respectively, would receive if authorized to tax site characterization, and repository development and operation activities. These payments,



historically and for the future, are determined by estimating the amount of Yucca Mountain Project property, purchases (in and out of the State of Nevada), and business activities (employees) within the jurisdiction of an affected unit of government.

As noted above, DOE acquires data from the Yucca Mountain Project organizations that purchase or acquire property for use in Nevada, have employees in Nevada, or use property in Nevada. These organizations include Federal agencies, national laboratories, and private firms. Not all of these organizations have Federal exemption status, so they pay the appropriate taxes. The purchases (sales and use tax), employees (business tax), and property (property or possessory use tax) of the Yucca Mountain Project organizations that exercise a Federal exemption are subject to the PETT (DIRS 103412-NLCB 1996).

The actual sales and use taxes, property taxes, and Nevada business taxes paid by Yucca Mountain Project organizations from May 1986 through September 2000 have been calculated. These organizations paid sales and use taxes of \$2.5 million for purchases made in Clark County, paid property or possessory taxes of about \$90,000 in Clark County, and paid the State of Nevada about \$810,000 in business taxes (DIRS 156763-YMP 2001). The PETT for sales or use taxes from May 1986 through June 2000 was about \$4.4 million for purchases in Clark County. For property taxes, it was about \$940,000 in Clark County. About \$130,000 was paid to the State of Nevada in business taxes.

Section 171 of the Act authorizes payments to the State of Nevada of \$10 million per year prior to the first shipment of waste, \$20 million upon the first spent nuclear fuel receipt, and thereafter \$20 million per year until closure. However, receipt of this payment waives the right of the State to disapprove the siting of the repository under Title 1 of the Act, and the State of Nevada has not agreed to do this. Nevertheless, assuming the State's notice of disapproval of the site, and if Congress overrode that disapproval, there would be no impediment to the State accepting these funds.

Other forms of compensation, such as funding of a nuclear research facility at University of Nevada, Las Vegas, could be considered, but would require Congressional approval before they could be implemented if they are not otherwise authorized by the NWPAA.

## **11.2 (7191)**

### **Comment** - EIS001337 / 0082

Page 2-69 Table 2-6. Comparison of Tables 2-5 and 2-6 suggests that the No-Action Alternative may be more costly to implement than the Preferred Alternative. The information in Table 2-7 suggests that the No Action Alternative is more risky than the Preferred Alternative. Collectively, these tables suggest that the Nation saves money by transferring risks from the 77 sites with waste inventories to Nevada. The savings to the Nation appears to be on the order of \$23 to \$28 billion. Given this magnitude of potential savings coupled with the transfer of risk to Nevada, the DEIS must discuss the issue of equity between locales where risk will be reduced and where risk will be concentrated. The concept of compensation of those areas to which risk will be concentrated by those areas in which risk will be reduced or eliminated must be discussed within the DEIS. Conceptually, up to 100 percent of the savings between the No Action and Preferred alternatives should be considered as compensation to those areas in which risk will be concentrated.

### **Response**

The EIS does not address the issue of equity as it pertains to risk or compensation for the Proposed Action through transfer of cost savings. It does, however, address the relative impacts of the Proposed Action and No-Action Alternative (see Section 2.4).

While these issues are not directly addressed in the Final EIS, DOE would address mitigation of impacts by entering into discussions with potentially affected units of local government to consider appropriate support and mitigation measures. Section 116(c)(2)(A)(i) and (ii) of the NWPAA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Furthermore, under the NWPAA, the Section 116 impact assistance review process and the EIS process are distinct from one another, and the implementation of one would

not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts.

## **11.2 (7233)**

### **Comment** - EIS001337 / 0120

Page 9-1 Section 9. In general, the treatment of mitigation in the DEIS is entirely insufficient. Many impacts identified within the DEIS have no mitigation measures identified for them at all (i.e., additional school enrollment in Lincoln County due to transportation activities). In preparing the FEIS, DOE needs to identify all impacts described within the DEIS and the FEIS must identify options for mitigation of all impacts.

Contrary to NEPA [National Environment Policy Act], the DEIS contains several proposed mitigation measures which are simply studies or simply describe studies which will lead to identification of mitigation measures. For most impacts identified within the DEIS, but characterized by DOE as non-significant (i.e., population growth in Lincoln County and [the] City of Caliente and related growth in government expenditures), the DEIS simply does not provide any suggested mitigation measures. In completing the FEIS, DOE should evaluate all listed mitigation measures against the types listed above to discern those which are of an unacceptable form under NEPA.

### **Response**

DOE believes it has identified a reasonable range of mitigation measures it would consider for those impacts that could be minimized or avoided through mitigation actions. Because some decisions have yet to be made, such a transportation mode and specific transportation corridor, additional studies would be required and more definitions information on impacts or possible mitigation actions are not available.

Section 114(a)(1) of the NWPAA authorizes the Secretary of Energy to determine whether to recommend approval of the Yucca Mountain site to the President for development as a repository for the disposal of spent nuclear fuel and high-level radioactive waste. A comprehensive statement of the basis for the recommendation, including a Final EIS, must accompany such a recommendation. However, because the decision to approve the site rests not with the Secretary, but with the President. DOE does not anticipate issuing a Record of Decision if the Secretary recommends the site to the President. Consequently, DOE does not anticipate issuing a Record of Decision.

DOE regulations (10 CFR 1021.331) require preparation of a Mitigation Action Plan when mitigation measures are identified in a Record of Decision. At this time, DOE has not decided whether it would prepare a Mitigation Action Plan. However, the Yucca Mountain site, if approved in accordance with provisions of the NWPAA would be subject to licensing by the Nuclear Regulatory Commission. DOE, in submitting its application to construct and operate the repository, would identify relevant commitments, including those identified in the Final EIS, to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of the licensing process.

DOE will enter discussions with potentially affected units of local government and consider appropriate support and mitigation measures. Chapter 9 of the EIS, which provides DOE's initial list of commitments available at this time, describes management actions that DOE would consider to reduce or mitigate adverse impacts to the environment that could occur if it implemented the Proposed Action. Chapter 9 states that Section 116 of the NWPAA requires the Secretary to provide financial and technical assistance to mitigate impacts of the development of a repository and the characterization of the site. The Section 116 mitigation assistance review process and the EIS process are distinct from one another and the implementation of one does not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in the EIS or by its findings on such impacts. Beyond the Payments-Equal-to-Taxes program that DOE has implemented under the requirements of Section 116(c)(3), a decision to provide financial and technical assistance under Section 116(c)(2) would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada that documented probable economic, social, public health and safety, and environmental impacts.

## 11.2 (8259)

### **Comment** - EIS001777 / 0002

You said this afternoon that there was money for states to help them educate people. Hopefully there is money to help people improve their health after having been affected by this nuclear waste. I did not see in my Belleville News Democrat paper – maybe it was – I don't think it was there. I didn't see anything in the paper, so that is another concern I do have. It has affected our health.

### **Response**

As indicated in Chapters 4, 5, 6, and 8 of the EIS, the transport and disposal of spent nuclear fuel and high-level radioactive waste would cause relatively minor impacts to human health.

As required by Section 180(c) of the NWPA, DOE would provide technical assistance and funds to states and Native American tribes for training public safety officials through whose jurisdictions it would transport spent nuclear fuel and high-level radioactive waste. Training would cover procedures for safe routine transportation of these materials and for dealing with emergency response situations. DOE would implement this training before beginning shipments to the repository. In the event of an incident involving spent nuclear fuel or high-level radioactive waste, the transportation vehicle crew would notify local authorities and the central communications station monitoring the shipment. DOE would make resources available to local authorities, if requested, to respond to such an incident. However, state and tribal governments have a primary responsibility to respond to and protect the public health and safety in their jurisdictions in accidents involving radioactive materials. The EIS does not include detailed training and community education plans. State, local, and tribal agencies and governments would develop such plans.

In addition, Section 116(c)(2) of the NWPA requires the Secretary of Energy to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impacts of the development of a repository and characterization of the site. The State and affected units of local government can request such assistance by submitting a report on probable economic, social, public health and safety, and environmental impacts. This could include, for example, needs for public education programs on the probable impacts of a repository that are identified by the State or any affected unit of local government.

The Price-Anderson Act establishes a system of private insurance and Federal indemnification that generally ensures that as much as \$9.43 billion is available to compensate for damages suffered by the public from a nuclear incident, regardless of who causes the damage. Price-Anderson Act indemnification would apply to the operators of a nuclear waste repository at Yucca Mountain and to transporters of nuclear waste from commercial and DOE sites to the repository. Payment would be from Federal funds or, if the liability was from activities funded by the Nuclear Waste Fund (for example, activities at a geologic repository), from that Fund. The liability of responsible parties is limited to the amount of coverage provided by the Act. State and local governments cannot be required to provide additional compensation. DOE has revised the EIS to include more details about indemnification under the Price-Anderson Act (see Section M.8).

## 11.2 (9112)

### **Comment** - EIS001937 / 0004

In light of the controversy in Nevada regarding compensation for individuals who worked at the Nuclear Test Site, Nye County, Nevada, and who may have been exposed to radiation and/or toxic materials during the course of their work at the location, it is entirely appropriate for the public to have their concerns acknowledged. Assurances that every aspect of engineering, and environmental and biomedical safety has been addressed are not reassuring without also acknowledging that possible risks may not currently be known and that a process for addressing possible future damages is being included in the current planning.

With the contemporary examples of hearings addressing claims for compensation for surviving families and individuals affected by nuclear activities sites such as Hanford, Washington and Oak Ridge, Tennessee, among others, it is clear that the process for handling dangerous materials is not adequate at this point in time. Nor is the process for admitting responsibility, identifying potentially responsible parties, and providing health care and/or compensation for those affected by unsafe practices adequate at this point in time.

It may not be appropriate to address these sorts of issues within the draft EIS, but without acknowledging them and identifying where and when these aspects of the project will be addressed, I cannot, in good conscience, affirm any but the No-Action Alternative.

**Response**

When Congress passed the Nuclear Waste Policy Amendments Act in 1987, it directed DOE to determine if Yucca Mountain would be a suitable site for a repository. Analyses to date indicate that the Yucca Mountain site would be suitable for a repository and that the risk to populations and the environment would likely be small.

While DOE has made every effort to analyze all potential impacts and assess all risks in the near and long terms, it is not able to assess impacts resulting from currently unknown risks. It is equally hard to put in place a process to address such risks. DOE acknowledges that there are uncertainties associated with the Proposed Action. (Section 5.2.4 of the EIS discusses how DOE has addressed this issue.)

DOE is aware of public criticism of its operations, both ongoing and historic. DOE is working to rectify and eliminate adverse environmental impacts from past programs, and working to ensure that current activities are conducted without environmental insult. DOE continues to incorporate lessons learned from past waste management practices, and the knowledge gained from research and development, into new management programs.

DOE is committed to protecting the safety and health of its workers, the public, and the environment. Policy and proper conduct of operations emphasize safety and environmental considerations above other program goals. Furthermore, DOE intends to design, construct, and operate all new facilities in a safe manner, relying on lessons learned from the last 40 years of managing spent nuclear fuel. DOE also is evolving toward greater openness, as demonstrated by the recent releases of information regarding past programs and practices.

**11.2 (9306)**

**Comment** - EIS001888 / 0033

Congress, the NRC [Nuclear Regulatory Commission and others will also employ the DEIS as a major source of information on potential program impacts. Therefore, it is important to Clark County, other affected units of government (AULG), and the State of Nevada that the DEIS adheres to NEPA guidelines and accurately and completely describes potential impacts to our communities from Yucca Mountain Program activities.

To the extent that local impacts are not addressed or inadequately addressed in the DEIS, the chances increase that Congress may not consider, or even be aware of, potentially substantive impacts to AULG. Clark County is concerned that impacts not noted in a document required by the NWPA could result in the disallowance of mitigation request even when supported by other documentation. This is a major factor requiring Clark County, Nevada, to strongly object to the DEIS in its present form. To meet the demands of the National Environmental Policy Act (NEPA) the DEIS must characterize and describe potential Yucca Mountain program-related impacts that may affect our communities. To this DOE has failed in this document.

**Response**

DOE intends to implement the requirements of Sections 180(c) and 116(c) of the NWPA [42 U.S.C. 10175(c) and 10136(c), respectively]. Section 180(c) requires the Secretary of Energy to provide technical assistance and funds to States for training for public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions, transportation of spent nuclear fuel or high-level radioactive waste would occur. The training is required to cover procedures for safe routine transportation and for dealing with emergency response situations.

In addition, and as discussed in Chapter 9 of the EIS, Section 116(c) requires the Secretary to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impacts of the development of a repository and characterization of the site. The State and any affected unit of local government can request such assistance by preparing and submitting a report on the probable economic, social, public health and safety, and environmental impacts. Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the scope of impacts that might be properly considered under Section 116 to the environmental impacts considered in this EIS.

Besides the Payments-Equal-to-Taxes program already implemented pursuant to the requirements of Section 116(c)(3) of the NWP, any decision to provide financial and technical assistance under Section 116(c) would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116(c)(2) to document likely economic, social, public health and safety, and environmental impacts.

**11.2 (9938)**

**Comment** - EIS001888 / 0466

[Clark County summary of comments it has received from the public.]

Local government funding may fall short of what is needed to provide services to the impacted populations.

**Response**

DOE does not anticipate impacts that would result in shortfalls to local government funding and the provision of community services. However, there are mechanisms in place to assist affected units of local government.

Section 116(c)(2)(A)(i) and (ii) of the NWP states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NWP limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NWP, the Section 116 impact assistance review process and this EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of requests for assistance from affected units of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts. If the proposed repository became operational, DOE would enter into discussions with the State of Nevada and affected units of local government and consider appropriate support and mitigation measures.

After a decision was made regarding the proposed repository and transportation modes and routes, local jurisdictions would be better able to identify the likely economic, social, public health and safety, and environmental impacts that would be the basis for a request for economic assistance. This could include assistance in providing additional medical and emergency response facilities, under Section 116(c) of the NWP.

**11.2 (9989)**

**Comment** - EIS001888 / 0493

[Clark County summary of comments it has received from the public.]

Several commenters believed that the EIS should discuss possible mitigations to offset or compensate negative socioeconomic impacts and provide analysis of how the measures would offset impacts. Suggested methods to mitigate impacts included use of Department policies that would encourage project employees to reside in specific counties, use of union versus non-union labor, or procurements being awarded to local companies. Some commenters requested this discussion should provide all sources of compensation for the diminution of property values caused by property being located in proximity to transportation routes and sources of compensation for takings of business opportunities and property interests which may be caused by perception-based impacts. One commenter stated the EIS should address how the program will achieve acceptable equity and fairness standards for the key affected communities, states, and participants. This analysis should consider acceptance in terms of a burden placed upon state and local governments and citizens.

**Response**

DOE appreciates the specific suggestions provided in the context regarding the possible mitigation of socioeconomic impacts. With regard to contracts and employment, DOE would continue to award contracts

pursuant to federal regulations but cannot address the issue of union vs. non-union labor. DOE would not involve itself in where employees live, but could, as it has done in the past, provide some support related to where employees live such as the transportation services to the work site.

The Yucca Mountain Site, if approved in accordance with provisions of the NHPA, would be subject to licensing by the Nuclear Regulatory Commission. DOE, in submitting its application to construct and operate the repository to the Commission, would identify relevant commitments, including those identified in the EIS, to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of the licensing process. DOE anticipates that the project plan and design would continue to evolve, potentially eliminating the need for some mitigation measures currently under consideration. Chapter 9 of the EIS, which provides DOE's initial list of possible mitigation measures, also identifies DOE-determined impact reduction features, procedures and safeguards; and mitigation measures under consideration for inclusion in the project plan and design. Chapter 9 also identifies ongoing studies that could eventually influence mitigation measures related to the project plan and design. Additionally, there are mechanisms in place for providing financial and technical assistance to potentially affected units of local government and the state of Nevada.

Chapter 9 of the EIS also discusses Section 116(c)(2)(A)(i) and (ii) of the NHPA, which state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NHPA limits the scope of impacts that could be properly considered under Section 116 to the environmental impacts considered in this EIS. A decision to provide assistance under Section 116 would be based on the evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts.

Another issue of interest is the DOE Payments-Equal-To-Taxes Program. Section 116(c)(3)(A) of the NHPA requires the Secretary of Energy to "...grant to the State of Nevada and any affected unit of local government an amount each fiscal year equal to the amount such State or affected unit of local government, respectively, would receive if authorized to tax site characterization activities at such site, and the development and operation of such repository...." The Yucca Mountain Site Characterization Office is responsible for implementing and administering this program for the Yucca Mountain Project. DOE acquires data from the various project-related organizations that purchase or acquire property for use in Nevada, have employees in Nevada, or use property in Nevada. These organizations include Federal agencies, national laboratories, and private firms. The purchases (sales and use tax), employees (business tax), and property (property or possessory use taxes) of the Yucca Mountain Project organizations that exercise a Federal exemption are subject to the Payments-Equal-To-Taxes Program (DIRS 103412-NLCB 1996).

Concerning perception based impacts or stigma, while DOE can measure the public's perception regarding the geologic repository and transportation of spent nuclear fuel and high-level radioactive waste, there is no known method to translate these perceptions into quantifiable impacts. Research in the social sciences have not found a way to reliably forecast linkages between perceptions or attitudes stated in surveys and actual human behavior. While stigmatization of southern Nevada can be envisioned in some scenarios, it is not inevitable. Consequently, DOE addressed but did not attempt to quantify any potential for impacts from risk perceptions or stigma in the EIS. This issue is discussed in Section 2.5.4 and Appendix N of this Final EIS.

With regard to property values and takings, DOE does not have definitive information on specific tracts of land that could be required. However, the Department would be required to use fair market value in the acquisition of real property. The Department must comply with the policies contained in the Uniform Relocation Assistance and Real Property Acquisition Policies Act, Title III, which includes the provision that the Agency (DOE) offer just compensation.

## 11.2 (9990)

### **Comment** - EIS001888 / 0495

[Clark County summary of comments it has received from the public.]

Many commenters indicated that the EIS and resulting Record of Decision should commit DOE to providing compensation for those communities and individuals negatively impacted (people nearby an accident, those contracting cancer). Commenters specifically indicated that compensation should be provided for: project oversight by Native Americans (all tribes, not just the National Congress of American Indians), State of Nevada and affected counties; peoples suffering radiological exposure above guidelines preparation of transportation (Section 180(c) of the NWSA), including accidents, education, emergency response, medical training and monitoring to communities along transportation routes; potential disruptions (routine, accidents, sabotage) and environmental damage from the construction and operation of rail spurs (Eureka County); health effects, floodplain damage, loss of game habitat/protected species, wetlands, disruption of crop production/marketing/transportation access, disruption of grazing patterns/marketing potential/mining and transportation access, and disruptions to historical rural and agricultural lifestyles; public safety training in local communities, especially affected governments and along highway or [rail] routes; Clark and Nye counties; infrastructure improvements and maintenance; communities and states that are burdened with HLW [high-level radioactive waste] facilities; police and fire protection, the cost of health/accident/disease prevention programs, and participation in worker safety programs.

### **Response**

DOE has identified for consideration mitigation measures that could reduce the potential impacts from the construction, operation and monitoring, and eventual closure of the proposed repository (Section 9.2 of the EIS). Section 9.3 discusses mitigation measures for transportation. Most of the topics raised by the commenter are discussed in Chapter 9. DOE regulations (10 CFR 1021.331) require preparation of a Mitigation Action Plan when mitigation measures are identified in a Record of Decision. At this time DOE has not decided whether or not it would prepare a Mitigation Action Plan. However, the Yucca Mountain site, if approved in accordance with the NWSA, would be subject to licensing by the Nuclear Regulatory Commission. DOE, in submitting an application to construct and operate a repository would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of the licensing process.

In addition, Section 116(c)(2)(A)(i) and (ii) of the NWSA states that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health or safety, and environmental impacts.” Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada that documented likely economic, social, public health and safety, or environmental impacts. If the proposed repository was approved, DOE would enter into discussions with the State of Nevada and affected units of governments and consider appropriate support and mitigation measures.

## 11.2 (10278)

### **Comment** - EIS002203 / 0003

If it's scientifically based, let's go with it, but if it's not, let's get what we can get out of this whole thing. I mean, we can get a north/south railroad in this state. We can have four-lane highways between Vegas and Reno. We can have a lot of things, rather than trying to ignore the problem and hope it will go away, because it will not go away.

It is here, and for us not to accept money or not to accept land and trade off for what we're dealing with the government, it's ludicrous, because we're going to get it, guys.

### **Response**

If Yucca Mountain was approved as the site for a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste, DOE would initiate discussions with potentially affected units of local government and consider appropriate support and mitigation measures. Further, under the NWSA, the impact assistance review process and the Yucca Mountain Repository EIS process are distinct from each other, and the implementation of one would not depend on the implementation of the other. Thus, the impacts identified in this EIS or its findings on such

impacts would not necessarily limit the provision of assistance under Section 116 of the NHPA. A decision to provide assistance would be based on evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 that documented likely economic, social, public health and safety, and environmental impacts.

## **11.2 (10478)**

### **Comment** - EIS002103 / 0004

Equity concerns. And believe me, there are equity concerns. We haven't pursued the equity concerns. I've got a wish list. There are equity concerns to be considered. The benefits that could be realized at Yucca Mountain if the timing was right, if the folks were right, if the folks were listening. I've got funding to AULG, affected units of local government.

From the nuclear waste fund for local impact of environmental studies to include credible oversight issue funding. Equity entitlement benefits: A world class environmental and energy research center at the University of Nevada; federal funding for a state of the art emergency response program; water right issues for Southern Nevada growth; transition and release of Nevada's federal lands to the state were eighty-six percent federal; funding for Southern Nevada's infrastructure and transportation systems; a railroad line between the north and Southern Nevada; Nevada university research and educational funding; and last but not least, a stewardship trust fund for grants to the state and county [entities] for site and use of YMP [Yucca Mountain Project] as studies conclude, as a repository during emplacement operations and as a monitored study area and as a closure equity.

### **Response**

The Department is authorized to consider some forms of compensation. Section 116(c)(2) of the NHPA requires the Secretary of Energy to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impact of the development of a repository and characterization of the site. The State and any affected unit of local government may request such assistance by preparing and submitting a report on the likely economic, social, public health and safety, and environmental impacts.

In addition to this financial assistance, the Secretary is authorized to grant to the State and any affected unit of local government an amount each fiscal year equal to that amount they would receive if authorized to tax the site characterization, development, and operation of a repository as they would tax non-Federal real property and industrial activities. Payments-Equal-To-Taxes (PETT) are made pursuant to Section 116(c)(3)(A) of the NHPA, which requires the Secretary of Energy to grant to the State of Nevada and any affected unit of government, an amount each fiscal year equal to the amount such State or affected unit of government, respectively, would receive if authorized to tax site characterization activities at such site, and the development and operation of such repository..." These payments, historically and for the future, are determined by estimating the amount of Yucca Mountain Project property, purchases (in and out of the State of Nevada), and business activities (employees) within the jurisdiction of an affected unit of government.

As noted above, DOE acquires data from the Yucca Mountain Project organizations that purchase or acquire property for use in Nevada, have employees in Nevada, or use property in Nevada. These organizations include Federal agencies, national laboratories, and private firms. Not all of these organizations have Federal exemption status, so they pay the appropriate taxes. The purchases (sales and use tax), employees (business tax), and property (property or possessory use tax) of the Yucca Mountain Project organizations that exercise a Federal exemption are subject to the PETT (DIRS 103412-NLCB 1996).

The actual sales and use taxes, property taxes, and Nevada business taxes paid by Yucca Mountain Project organizations from May 1986 through September 2000 have been calculated. These organizations paid sales and use taxes of \$2.5 million for purchases made in Clark County, paid property or possessory taxes of about \$90,000 in Clark County, and paid the State of Nevada about \$810,000 in business taxes (DIRS 156763-YMP 2001). The PETT for sales or use taxes from May 1986 through June 2000 was about \$4.4 million for purchases in Clark County. For property taxes, it was about \$940,000 in Clark County. About \$130,000 was paid to the State of State in business taxes.



While the NWPA requires PETT payments, they are not discriminating factors in the EIS decisionmaking process. Section 171 of the Act also authorizes payments to the State of Nevada of \$10 million per year prior to the first shipment of waste, \$20 million upon first spent fuel receipt, and thereafter \$20 million per year until closure. However, receipt of this payment waives the right of the State to disapprove the siting of the repository under Title I of the Act, and the State of Nevada has not agreed to accept these payments. Nonetheless, assuming the State's notice of disapproval of the site, and if the Congress overrode that disapproval, there would be no impediment to the State accepting these funds.

Other forms of compensation, such as funding of a nuclear research facility at the University of Nevada, Las Vegas, could be considered, but would require Congressional approval before they could be implemented if they are not otherwise authorized by the NWPA.

## **11.2 (10493)**

### **Comment** - EIS002105 / 0006

If you accept the fact that in spite of your perhaps personal likes or dislikes of nuclear waste, it will come to Nevada, then what should Nevada receive as compensation for accepting nuclear waste? I would suggest the following minimum consideration: An annual payment to the State treasury to have State of Nevada, that number to be negotiated, needless to say, by our leaders. Nevada to receive all rights to recycling and also the income that would come from the recycling process. Creation of the world's best nuclear research facility at UNLV [University of Nevada, Las Vegas] as a result of having that facility in this area. The Federal Government to assume all liability and cost of management of the test site.

### **Response**

The Department is authorized to consider some forms of compensation. Section 116(c)(2) of the NWPA, requires the Secretary of Energy to provide financial assistance to the State of Nevada and any affected unit of local government requesting such assistance to mitigate the impact of the development of a repository and characterization of the site. The State and any affected unit of local government may request such assistance by preparing and submitting a report on the likely economic, social, public health and safety, and environmental impacts.

Section 171 of the Act also authorizes payments to the State of Nevada of \$10 million per year prior to the first shipment of waste, \$20 million upon first spent fuel receipt, and thereafter \$20 million per year until closure. However, receipt of this payment waives the right of the State to disapprove the siting of the repository under Title I of the Act, and the State of Nevada has not agreed to accept these payments. Nonetheless, assuming the State's notice of disapproval of the site, and if Congress overrode that disapproval, there would be no impediment to the State accepting these funds.

Other forms of compensation, such as funding of a nuclear research facility at University of Nevada, Las Vegas, could be considered, but would require Congressional authorization before they could be implemented if they are not otherwise authorized by the Nuclear Waste Policy Act, as amended.

## **11.2 (10755)**

### **Comment** - EIS002145 / 0002

As a state commander of the Veterans of Foreign Wars, I sat in Senator Reid's office and I asked him about the ten million dollars a year that we've been offered, and he said, "Roy, that money is a carrot that you hold in front of a donkey. If we take that money, we give up all our rights to say no." That was a lie. We went from his office to Senator Bryan's office. I ask him the same question. He said, "Roy, there's no money. There never has been." Which one was telling me the truth? As I said, there are liars on both sides. Gentlemen, this is a national problem -- and ladies, I'm sorry. This is a national problem. It's not just our problem.

### **Response**

Section 171 of the NWPA, requires the Secretary of Energy to offer to enter into a benefits agreement with the State of Nevada. Section 171 specifies the benefits schedule -- annual payments for a repository before the first receipt of waste of \$10 million per year, \$20 million on the first spent nuclear fuel receipt, and \$20 million per year thereafter until closure of the facility. Section 171 also specifies that a state accepting these benefits waives its rights under Title I to disapprove the recommendation of a site for a repository.

The State of Nevada has chosen to not enter into such an agreement.

## **11.2 (10805)**

### **Comment** - EIS002043 / 0007

In the discussion of the socioeconomic impacts associated with construction of the Caliente (Pg. 6-57) and Carlin (Pg. 6-63) rail route, the DEIS identifies that the annual average number of construction workers would be 500 to 560 and that there would be 5 construction camps. One of the camps would most likely be in the vicinity of Goldfield and would have a significant impact on this community. The EIS needs to address this impact and how it will be mitigated. These mitigation measures could include financial assistance and temporary structures to accommodate the additional workers and their families.

### **Response**

Section 6.3.2.2 of the EIS presents impacts for the rail corridor implementing alternatives including Carlin and Caliente. Mitigation measures that could be adopted to reduce potential impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste to Yucca Mountain are addressed in Chapter 9 of the EIS. More specific or additional mitigation measures would be identified and implemented if the repository was approved and a particular transportation mode and route were selected.

In addition, Section 116(c)(2)(A)(i) and (ii) of the NHPA state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health or safety, and environmental impacts.” Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada that documented likely economic, social, public health and safety, or environmental impacts. If the proposed repository was approved, DOE would enter into discussions with the State of Nevada and affected units of local government and consider appropriate support and mitigation measures.

After a decision was made regarding the proposed repository and transportation modes and routes, local jurisdictions would be better able to identify the likely economic, social, public health and safety, and environmental impacts that would be the basis for a request for economic assistance, which could include assistance in providing temporary housing facilities or other services, under Section 116(c) of the NHPA.

## **11.2 (11716)**

### **Comment** - EIS000601 / 0003

If the repository is placed in Nevada, we need to charge a million dollars a pound.

### **Response**

While this commenter’s particular concept of compensation is not directly addressed in the Draft EIS or within the scope of the EIS as established by the NHPA, Chapter 9 of the EIS does address the requirements for impact mitigation and compensation, indicating that Section 116(c)(2)(A)(i) and (ii) of the NHPA state that “the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government...to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site.” Such assistance can be given to mitigate likely “economic, social, public health and safety, and environmental impacts.” Within that broad framework, neither Section 116 nor any other provision of the NHPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS.

Under the NHPA, the Section 116 impact assistance review process and the EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not necessarily be limited either by the impacts identified in this EIS or by its findings on such impacts. Any decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. DOE would enter into discussions with potentially affected units of local government and consider appropriate support and mitigation measures.

## 11.2 (12501)

### **Comment** - EIS001878 / 0089

The DEIS must also disclose whether the loss or diminution of a water right would be a taking of private property rights requiring compensation under the Constitution of the United States.

### **Response**

The general purpose of this EIS is to analyze the potential for environmental impacts from the Proposed Action to construct, operate and monitor, and eventually close a repository for disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain. The EIS is not the appropriate forum to make determinations on constitutional matters. The EIS discusses the availability of groundwater resources in Section 3.1.4.2. Section 4.1.3.3 addresses the potential for adverse impacts to groundwater, including the potential for impacts to water availability, anticipated from repository construction and operation. Chapter 5 contains a full discussion of the potential for adverse long-term groundwater impacts and analyzes the potential for groundwater contamination thousands of years after the emplacement of spent nuclear fuel and high-level radioactive waste in the proposed repository. The EIS does not address the issue of whether the loss or diminution of any water right would be a taking of private property rights requiring compensation under the Constitution of the United States. Whether such an effect on a water right, if it occurred, would require compensation is a separate legal question that is beyond the purview of the EIS, and would more properly be a matter for consideration by the courts.

## REFERENCES

- |        |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                             |
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